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BANKSIDE: A TEST CASE IN TOWN PLANNING

THE controversy over the proposal to erect a new power station on Bankside continues with unabated vigour, and Mr. Silkin shows no sign of giving way to the spate of destructive criticism with which the project has been met. In point of fact, he defends it with increasing doggedness. Last week at a Press conference he gave a variety of practical reasons why the station must be built, and even went so far as to claim that it would be a "good neighbour" to St. Paul's.

The changes that have taken place in the scheme since it was first mooted are worth noting. The original scheme was a veritable giant, coal-burning, with two great chimney-stacks; now it is proposed to be much lower in height, oil-burning, and with only one stack. This much concession at least has been made to public opinion. Mr. Silkin, therefore, claims that æsthetic objections have been met and justifies the erection of the station on grounds of necessity.

Now no one has ever suggested that power stations cannot be impressive works of architecture. Many of them, of course, are not, but of recent years there has been a great improvement in the appearance of this type of building, mainly as a result of the employment of architects in their design. The chief criticisms of the Bankside project are that it is bound to compete with St. Paul's and interfere with the view, and that in any case Bankside is not the right place for a building of this type. An alternative site at Rotherhithe has been suggested, but Mr. Silkin retorts that there is need for both stations, and more. And so the argument goes on.

The project has been so clouded by controversy on æsthetics and points of practical detail that the real objection to it has not been sufficiently emphasised; and that is that it strikes at the very foundations of town planning. In effect, this is a test case as to whether there is any hope for town planning so far as the redevelopment of outworn urban areas is concerned.

For at least 40 years town planning has been advocated as one of the greatest needs of our time. Legislation has been passed to enable State and local authorities to correct and avoid a repetition of past mistakes. A town planning profession has grown up. A Ministry of Town and Country Planning has been created. Experts have been engaged to draw up plans for the creation of new towns and the remodelling of old ones. It was agreed that we had learned our lesson and repented of our bad past. Zoning was the watchword. Never would there be a repetition of the urban chaos that marked our rise as a great industrial nation. And then came the Bankside project and its implications.

It is true, of course, that there is already a power station on the site and that the proposed new building can be regarded as an extension of it. The point, however, is that there ought not to be a station there at all; the existing building is a survival of our primitive past. It ought to go, and go it would if the London County Council's plan for the South Side were carried out. As Lord Latham has pointed out, the importance of the proper location of generating stations in relation to other buildings was emphasised in the evidence, at the inquiry, of Sir Patrick Abercrombie, Dr. Charles Holden, Professor Holford, Mr. Walter Edgson and the Council's officers, and it is clear that a generating station, however well designed, is likely to prevent the proper development of the adjoining land for cultural, educational, commercial and residential uses in conformity with the London Plan. "If the station is built at Bankside," says Lord Latham, "the whole area will have to be re-zoned, for the issue is not only the existence of a power station itself but the dominant influence, contrary to good planning, which it will have on the development of a wide area on the south bank of the Thames." There is no evading this obvious issue.

Mr. Silkin, however, claims that the effect of the proposal on the plans for developing the south bank will be "quite tentative." There are, he says, a great many other schemes to be completed before the south bank can be tackled, and its development would be the third phase of a 50-year plan. But in the meantime the south bank cannot remain as it is. It is bound to be redeveloped piecemeal. Mr. Silkin avoids the obvious point that if a large area is to be redeveloped, over no matter how long a period, a plan is necessary, and it must clearly have some rational intention. If it has not, can it be a plan in the proper sense of the word, and can it control and direct redevelopment on the right lines over a long period of time? No, Mr. Silkin is not thinking of planning; he is proposing to perpetuate the policy of *laissez faire*.

We had hoped that Mr. Silkin would be our 20th-century Haussmann. Haussmann, it is true, was a dictator, albeit a benevolent one, but he made Paris the finest city in the world. Mr. Silkin is not lacking in the qualities of dictatorship, for he is willing to disregard the views of all the local authorities concerned—the L.C.C., Southwark B.C. and the City Corporation, not to mention the custodians of St. Paul's and the representatives of æsthetic interests; but under his direction London has little prospect of vying with Paris. Can we imagine an intrusive power station opposite Notre Dame?

We note, by the way, that the revised plans for the power station are to be submitted to the Royal Fine Art Commission. It would be interesting to know the terms of reference. Will the Commission be confined to the æsthetic effect of the power station only or will it be invited to express its views on the appropriateness of such a building in the redevelopment of the south side? This is a test case that involves the future of town planning in one of its most vital aspects, and no amount of specious reasoning on side issues can obscure the fact. We trust that Mr. Silkin may yet give ear to the reasoned objections which have been made to a scheme that is out of harmony with the best town planning principles of our time.

NOTES AND NEWS

Bankside: L.C.C.'s Concern.

At Tuesday's meeting of the London County Council the Town Planning Committee reported on the proposal of the City of London Electric Lighting Co. to erect a new and larger power station at Bankside, Southwark, and on the steps leading up to the recently announced decision of the Minister of Town and Country Planning to allow the scheme to go forward. The Committee reported that they view the Minister's decision with the gravest concern, and in their judgment it raises the whole question of the planned and seemly development of the South Bank of the Thames. They expressed the hope that the Minister of Town and Country Planning and the Minister of Fuel and Power may see their way to reconsider the decision while there is yet time. They also recommended the Council to express to the Minister of Town and Country Planning its strong opposition to the erection of the new power station as being prejudicial to the proper planning and redevelopment of the South Bank between Southwark and Blackfriars Bridges, as well as detrimental in relation to St. Paul's Cathedral, and to urge that the decision to permit the erection of the station be reversed.

Dr. Holden as Consultant.

At the same meeting of the Council, Dr. Charles Holden, F.R.I.B.A., was formally appointed as architectural and planning consultant to advise on the development of the South Bank of the Thames between Westminster and Waterloo Bridges.

The proposals already agreed by the Council or envisaged in the County of London Plan for this part of the South Bank provide for the leasing of sites for Government offices and a National Theatre, and the provision of a cultural centre. It is proposed that the scheme of development shall proceed in two stages : (*a*) the preparation by Dr. Holden, in consultation with the architects to the London County Council, the Ministry of Works and the National Theatre, of plans for the general layout of the area; and (*b*) collaboration with the architects responsible for the design of individual buildings with a view to ensuring development in accordance with the general scheme.

The Council agreed that a fee of £6,000 shall be paid to Dr. Holden for the work to be carried out by him in connection with stage (*a*) of the scheme, which it is expected will take about one year to complete.

R.I.B.A. Conference, Dublin.

Details are now available of the Architects' Conference, to be held in Dublin from June 11-14, and open to all members and students of the R.I.B.A., the Architectural Association, the A.B.T., and the allied societies. The Conference opens on the Wednesday night with an informal reception at the Royal Hibernian Hotel. The inaugural meeting on the Thursday morning at the Mansion House will be opened by the Lord Mayor and by the President, Sir Lancelot Keay, after which Mr. J. Murray Easton and Mr. S. E. T. Cusdin will speak on "Recent Trends in Hospital Design." In the afternoon, there will be a garden party at Trinity College and the Conference photograph. The banquet will be held in the evening at the Gresham Hotel.

On Friday, Mr. W. T. Benslyn will read a paper on "Modern School Buildings," and in the afternoon there will be several tours of the city. Alternatively, there are planned two whole-day tours of Co. Dublin. In the evening there is the Conference Dance at the Gresham Hotel. On Saturday morning, there will be a visit to Guinness's Brewery. Full details and entry forms (returnable not later than May 31) are obtainable from the Secretary, R.I.B.A., 66, Portland-place, W.1.

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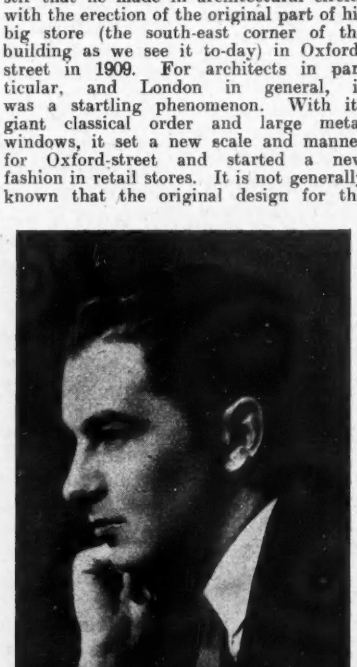
The White Horse Hill Saved.

Mr. Paling, the Postmaster General, announced in the House of Commons on May 7 the abandonment of the scheme for the erection of a television station on White Horse Hill, on the Berkshire Downs. We congratulate Mr. Paling on his decision, and Mr. Betjeman (who first drew public attention to the proposal) on his vigilance.

An Echo of 1909.

The death of Gordon Selfridge will recall to readers of the older generation the stir that he made in architectural circles with the erection of the original part of his big store (the south-east corner of the building as we see it to-day) in Oxford-street in 1909. For architects in particular, and London in general, it was a startling phenomenon. With its giant classical order and large metal windows, it set a new scale and manner for Oxford-street and started a new fashion in retail stores. It is not generally known that the original design for the building was made by the late D. H. Burnham, of Chicago, who is said to have got tired of wrestling with the complications of the London Building Act and passed the job over to the late R. Frank Atkinson, to whom it is more generally attributed. The extensions, of course, have been the work of other hands, though the general treatment has been preserved.

The original section is characteristic of the great bulk of the work that was being done in the United States at that time. To-day it looks rather old-fashioned. Few, if any, architects or their clients would think for a moment of wasting money and space on giant orders; but at the time it all seemed very progressive. Its influence, on the whole, was to the good, for it came at a time when Edwardian Classic was becoming rather timid and it certainly taught us to think on big lines.



MR. JOHN NEEDHAM, Dip. Arch. (Leeds), A.R.I.B.A., whose design has been placed first in the competition for County Buildings Extension, Cupar, Fife. The design is illustrated on page 470.

Return of Charles I Statue.

Le Sueur's statue of King Charles I, which the Ministry of Works kept for safety during the war at Mentmore Park, Leighton Buzzard, has been returned to its pedestal at Charing Cross. It left the Ministry of Works store-yard (behind the Guards' Memorial in St. James's Park) last week. While the statue has been in store the Ministry has carried out certain repairs which had become necessary owing to the passage of time. Now the statue is in its place a new sword and badge of the Order of the Garter, known as the Lesser George, will be added to replace the originals, stolen in 1844. A bronze tablet will be fixed in the pavement at the base of the statue with the inscription :—

King Charles I, by Hubert Le Sueur

The present sword and the badge of the Order of the Garter known as the Lesser George were added in 1947 in place of the originals which were stolen on October 28, 1844, on the occasion of Queen Victoria's visit in State to the City to open the Royal Exchange.

Some Thoughts on Clothes Lines.

It is interesting to see in the daily Press that the Ashford (Kent) Urban District Council have decided, while planning a new development scheme, that "New houses on five roads are planned to show their fronts to the arterial road and not their backs," and, as one of Ashford's planning consultants states, "Foreign visitors' first impression of an English town will not be back-gardens with washing on the line."

Houses facing on to arterial roads seem to us a matter out of which no good ever came, anyway. Planning would appear to have reached a pretty serious *impasse* if the only alternatives are houses facing an arterial road or houses backing on to arterial roads. The idea of entering a house from an arterial road at all strikes us as rather grim. Nor does the question of aspect seem to receive much notice, and when the road snakes its way from east to west, must one side of it have houses doomed for their whole existence to be deprived of sun in their living rooms? No, the answer seems to us to be to ignore the arterial road as a setting for domestic architecture, back, front or sideways, and set the house as far away from it as possible.

As for "the foreign visitors' first impression," let us not get self-conscious about the wrong things. Let us consider, for a change, *our* impressions.

A.A. Arrangements.

It has been found necessary to postpone the Architectural Association lecture on "Sculpture" arranged for Tuesday, May 27, but a business meeting will be held at No. 36 Bedford-square at 4.45 p.m., when the result of the ballot for

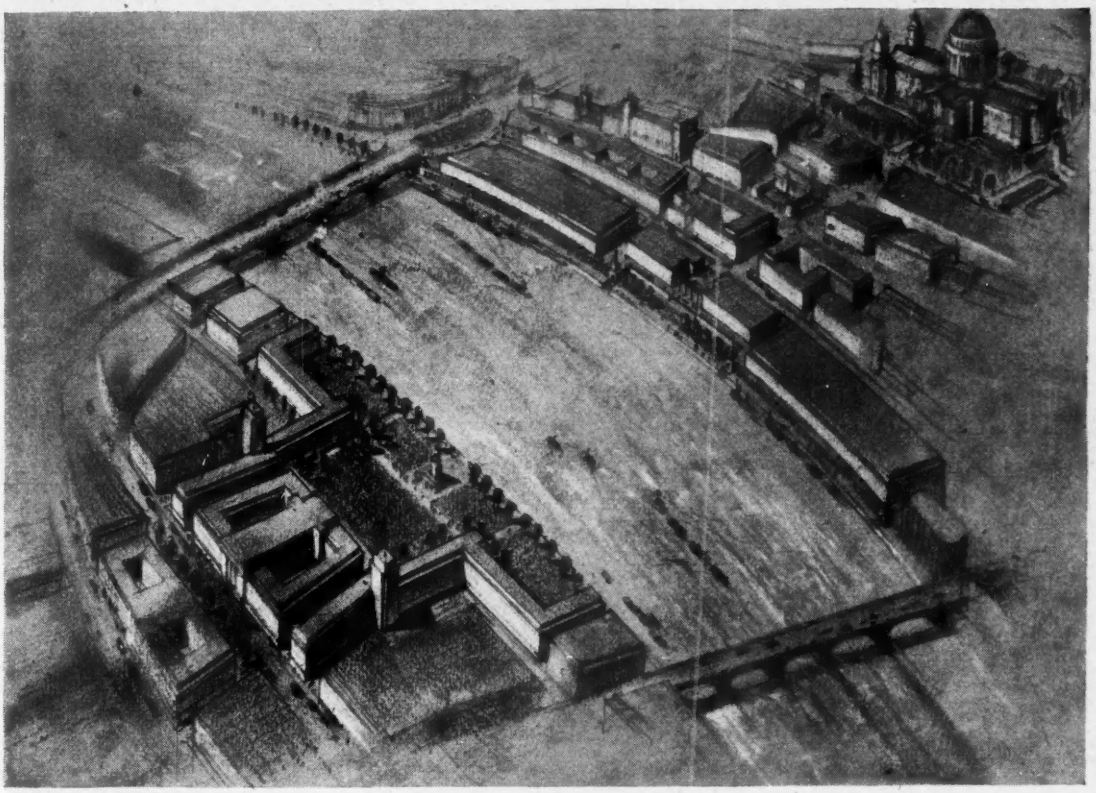


Photo by courtesy of *The Times*.

A SOUTH BANK PLAN. This perspective view of Dr. Charles Holden's suggested treatment of the South Bank of the Thames, between Blackfriars and Southwark bridges, was shown at the public inquiry into the proposal to rebuild Bankside power station. It indicates how Dr. Holden, consultant to the L.C.C. on the South Bank redevelopment (who, with Professor W. G. Holford, prepared a scheme for the opposite bank), envisages non-industrial buildings (on left of drawing) facing St. Paul's Cathedral.

the Officers and Council for Session 1947-48 will be announced. A visit by river to Greenwich has been arranged for Saturday, June 21.

Houses for Sale to Local Authorities.

THERE is good reason to expect, states a correspondent, that Mr. Aneurin Bevan, Minister of Health, has decided to encourage still more house builders, large and small, to build for sale to the local authorities. On the other hand, as far as building for sale to private owners is concerned, there may be drastic reduction in the number of licences issued. At present a ratio of one house for private ownership to four houses to be let by local authorities is permitted. There has been a good deal of criticism of bad work on houses built by builders who have not been admitted to the National Register of House Builders. Under these circumstances Mr. Aneurin Bevan will encourage the procedure outlined in Ministry of Health circular letter 92/46. Under this, house builders building for sale to local authorities must conform to the standards prescribed by the National House Builders' Registration Council. A good deal more is likely to be heard of this aspect of house building in the next few weeks.

Ancient Buildings in Coventry.

COVENTRY CITY COUNCIL and the Ministry of Town and Country Planning have been asked to accept a schedule of ancient buildings in the town planning area of the city, prepared by the antiquities committee of the Coventry City Guild, of which the Mayor of Coventry is president. The cathedral and two other mediæval churches of Coventry, and a number of other churches and buildings in and near the city, are included in a section of buildings which are of such historical and artistic importance that "in no case would their destruction or removal from their present sites be justifiable."

An Appointment.

THE organiser of the *Daily Mail* Ideal Home Exhibition announces the appointment of Mr. Douglas L. Dick, F.R.I.B.A., as Exhibitions Architect to Associated Newspapers, Ltd. He succeeds Mr. Ian Jeffcott, L.R.I.B.A., R.D.I., who has resigned to resume private practice. Mr. Dick was deputy architect for the exhibition this year. Before the war, as Senior Assistant Architect for Poplar Borough Council, he designed a large amount of work, covering a wide range of municipal building.

COMING EVENTS

Tuesday, May 20.

THE LONDON SOCIETY. Annual Meeting. The Old Hall, Lincoln's Inn. 5.30 p.m.

TOWN AND COUNTRY PLANNING ASSOCIATION. Dr. L. Dudley Stamp, B.A., D.Sc., on "Planning for Agriculture, Forestry and Rural Amenities." 28, King-street, W.C.2. 6 p.m.

HOUSING CENTRE. Mr. R. Fitzmaurice, Deputy Chief Scientific Adviser, Ministry of Works, on "Recent Research in Housing." H.C., 13, Suffolk-street, S.W.1. 1.15 p.m.

Wednesday, May 21.

ROYAL INSTITUTION OF CHARTERED SURVEYORS. Annual Country Meeting. The Grand Central Hotel, Belfast. Continuing until May 24. (See p. 467 for details.)

Thursday, May 22.

INSTITUTION OF STRUCTURAL ENGINEERS. Annual General Meeting. 11, Upper Belgrave-street, London, S.W.1. 6 p.m.

Professional Announcement.

MR. FRANK N. FALKNER, O.B.E., F.S.I., F.I.Arb., of 39, Bedford-square, W.C.1, has taken into partnership Messrs. J. W. Symonds, F.S.I., F.I.Arb., J. L. Harwood, F.S.I., F.I.Arb., and G. Goronwy Owen, F.S.I., F.I.Arb., who have been associated with him for many years. In future, the practice will be carried on from the same address under the title of Frank N. Falkner and Partners.

From *The Builder* of 1847

Saturday, May 15, 1847.

THE ARCHITECTURAL ASSOCIATION. At a meeting of the Architectural Association (late the Association of Architectural Draughtsmen) on the evening of the 5th instant, a paper was read by Mr. J. K. Colling upon Design in Architecture. The writer said that the author of the "Newleafe Discourses," in condemning the extent to which copyism and adherence to precedent were carried in the present day, had gone to the opposite extreme in denouncing copying altogether. He (the reader) considered architecture to depend much upon copying—and that the art was guided by rules and precedents—that the true aim of the art was to take advantage of all which had been already invented in producing new and beautiful combinations—new effects and further improvements.

*** This was the first reference to the Architectural Association in our columns. The article goes on to state that the election of officers for the ensuing year would take place on the 19th inst. At the meeting Mr. Robert Kerr was elected President and Mr. Jayne Hon. Secretary. The first conversazione was held at the new premises, Lyon's Inn Hall, Strand, on Friday, October 8, 1847.

THE FUTURE OF ROUEN

By B. S. Townroe, M.A., Hon.A.R.I.B.A.

WHEN I was in Rouen recently there was much talk about future rebuilding. The city was severely damaged in 1940 by the Germans, and there was a good deal of destruction of property during and after the Battle of France. At the end of that year a well-known French architect and town planner, Monsieur Greber, was asked to prepare a plan of reconstruction of those parts of the town which had been destroyed by fire, following the fall of bombs and shells.

Those who visited Rouen before the war will no doubt remember how the city lies on the right bank of the River Seine, overlooked by plateaus about 400 feet high. It was a city where an enlightened municipal authority had widened streets, planted broad boulevards and provided modern drainage. The walls which were besieged by English soldiers under Henry V, had expanded into the boulevards of to-day. In spite of the bombing from 1940 to 1944 two architectural treasures, the *Place du Vieux Marché*, where Joan of Arc was burned, and the *Rue de la Grosse Horloge*, remain intact.

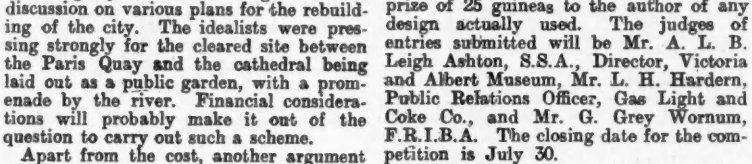
The destruction in 1940 of many of the old houses which stood between the river and the cathedral, provides magnificent views of this famous ecclesiastical edifice, which for centuries had been too closely surrounded by shops, offices and tenements. Aerial bombardments in 1941, 1942, 1943 and, above all, the attacks by American 'planes in 1944, led to many acres of ground to the south of the cathedral being cleared of all buildings, and considerable destruction in other parts of the city. M. Greber has therefore enlarged his plan so as to provide for the future needs of one of France's most prosperous ports, the capital of Normandy, the county town for shopping by agriculturists for many miles around, and above all an historic city with many ancient buildings still standing. The cathedral itself, although badly damaged, is now being repaired.

During my visit I heard a good deal of discussion on various plans for the rebuilding of the city. The idealists were pressing strongly for the cleared site between the Paris Quay and the cathedral being laid out as a public garden, with a promenade by the river. Financial considerations will probably make it out of the question to carry out such a scheme.

Apart from the cost, another argument was supported by those who were in favour of new buildings being erected on this cleared area, rather than its being converted for ever into an open space. Those who favour modern building urge that the city of Rouen is not only a museum but is above all an industrial and commercial centre of great importance to the future economy of France. About eight per cent. of the commercial offices were situated in the district which has been destroyed. It is thought that it would be better for them to be replaced as near as possible to their original situation.

From the architectural point of view too, it is argued that it will be better to control the buildings, especially as regards design and height, rather than to have no buildings at all. In fact, some believe that from the æsthetic point of view the beauty of the cathedral will be all the more marked if the eye is led, as if by a ladder, from low buildings to the spire above. Everyone admits that the pre-war mistake of masking the edifice by houses that are too high must on no account again be made. In the future it is agreed that no new buildings should be more than 60 feet high. In that case the Arts Theatre, which was completely destroyed, will have to be built in another part of the city. This is of course not the theatre built at the end of the eighteenth century, where Taglioni danced, but a reconstructed theatre designed in 1882 by the architect Sauvageot.

In preparing his plans for preserving for the future unobscured vistas of the exising historic buildings on the right bank of the Seine, M. Greber is receiving considerable help from M. Chauvel, who is the Architect-in-Chief for Historic Monuments in France. A committee of experts, including architects, archæologists, engineers and representatives of the principal industries concerned, has also been set up to advise on the future renaissance of the city of Rouen.



SILHOUETTE DU QUARTIER DE LA CATHEDRALE
VUE DU QUAI RIVE GAUCHE

RECONSTRUCTION OF ROUEN. Léandre Vaillat, Architect.

COMPETITION NEWS

An Exhibition Stand.

A COMPETITION organised by "Art and Industry" and sponsored by De La Rue Gas Development, Ltd., offers a first prize of 100 guineas, second prize of 50 guineas, and third prize of 25 guineas, for the best design submitted for an exhibition stand for the display of De La Rue gas appliances. There will be a further special prize of 25 guineas to the author of any design actually used. The judges of entries submitted will be Mr. A. L. B. Leigh Ashton, S.S.A., Director, Victoria and Albert Museum, Mr. L. H. Hardern, Public Relations Officer, Gas Light and Coke Co., and Mr. G. Grey Wornum, F.R.I.B.A. The closing date for the competition is July 30.

Technical and other details, together with sizes and all relevant measurements, also illustrations, will be supplied to intending competitors on application to the Editor, "Art and Industry," 66, Chandos-place, W.C.2.

HORTICULTURE AND ARCHITECTURE

CLOTHING THE BARE NEW GARDEN

By Ernest J. Chaloner, F.R.H.S.

When we think of the paradox of the land of skyscrapers producing that great architect who understood the value of blending horticulture and architecture perhaps better than anyone else—Frank Lloyd Wright—we can gain hope for the beauty of the new homes that are slowly taking shape in our own country. Wright, the American architect, with a sense of the earth and of the green frame essential to any real home, has set us an example.

He believed that the house should look like a plant rooted in the soil, and not like an aeroplane about to take flight. His spirit can well be applied to the new houses envisaged by architects in this country to-day.

As Lionel Brett said the other day in a broadcast, under Wright's influence, "Garden and house interpenetrate so that you cannot see where one ends and the other begins."

The thoughtful planning of trees, shrubs and hedges will help us to do this. If the fence is bare it can be used to form the ideal blend by covering it with creepers, fruit espaliers and fan-shaped trees. Without the spirit of the garden, which means peace, there cannot be any real beauty about the new homes.

Starting with trees. The quick-growing ones are Lombardy poplar, laburnum and silver birch. They can all be planted in very ordinary soil and are very hardy. The laburnum succeeds in towns, just as well as the acacia. Laburnum onagyroides is the species most commonly useful in new gardens. It soon grows into a good tree, with a wealth of yellow blossom. Many varieties may be purchased from a good nursery for 12s. 6d. to 15s. each.

Hedges.

In the new homes with a short-term policy, the first consideration will be hedges, those precious green walls that give a sense of intimacy to the smallest garden, or, if they are low and friendly hedges, inviting the gaze of the outside world, then forming a green frame for the flowers and other things inside.

To have a fair start a hedge needs a two or three feet deep bed of rich soil, for it is likely to remain in the same spot for a considerable time. When once established it takes care of itself, beyond the trimming and shaping dear to the heart of its owner. There is one exception to the rich bed—golden privet—which is lovelier in colour and growth if the soil is quite ordinary.

The hedge of two or three feet high is likely to be popular in new homes. It is easy to grow, more varied in effects, and does not shut out the light from all the other things in the garden; furthermore, the true gardener does not want his work to be enjoyed simply by himself. His garden will be no monastery garden, and all the passers-by shall share it and enjoy it.

The universal green privet can be made into a thick hedge in four or five years if it is planted in rich soil and in a moist climate; on ordinary soil and in dry places it takes ten years to make a full green wall of leaves. The same remarks apply to beech, yew, holly, box and gorse, and the other well-known hedges.

Another hedge to be planted for rapid results is commonly known as "quick," or whitethorn or hawthorn, and it makes a brave green wall in a few years' time. Sound young plants must be obtained from a nursery gardener and placed in

soil enriched with manure, or compost, if results are to keep pace with the common name of this pleasant hedge.

Laurastinus, one of the viburnums, is a handsome evergreen which, during dull periods in the garden, gives lovely trusses of white buds tinged with pink. It can be trained into a low or tall hedge, and responds to good pruning and cutting. It likes sea air and grows well near the coast. The popular cupressus macrocarpa is one of the quickest of all the evergreen hedges. Lonicera nitida, one of the most decorative of the honeysuckle family, will make a thick hedge of small dark green leaves, with very small white flowers in June.

The thuya evergreen, or arbor-vitæ of America, although a bit straggly, has three good varieties for hedge purposes.

A Pleasant Hedge.

The Myrobalan plum provides a pleasant and cheap hedge, which should be started in October and onwards to February. Two-year-old plants may be set six inches apart to form a fine thick hedge, to be trimmed every June. Another evergreen to be remembered is that variety of berberis known as aquifolium, with little black berries holding a violet bloom, after the bright yellow flowers in April. It grows four to six fet high.

The cherry laurel, with its white flowers in Spring, will provide an eight-foot hedge, and the ordinary tamarisk, which does so well by the sea, has white and pink flowers and will grow ten feet high. It should be well clipped in Spring-time. Filbert and common hazel, with their coloured foliage, provide a looser kind of hedge, very attractive, even if people can see through it. Forsythia, roses and spiræa can be quickly sent up into a hedge in the same way.

Some heaths, especially alba, make good hedges, up to five feet, and need practically no pruning; and common broom does well on light soils, quite poor soils, in fact.

If the grower is going to be content with a low hedge, hornbeam or beech, though not evergreen, have a pleasant habit of holding their richly-coloured autumn leaves right through the winter, so that the hedge effect is still retained. Other attractive low hedges are rosemary, lavender and some other herbs. They take three years to establish, and make up in beauty and perfume for what they may lack in height. Southernwood, a three-feet hedge, mixes well with lavender and rosemary, and has aromatic, grey-green foliage. When the flowers are over on these plants, all may be closely clipped. One of the shrub veronicas, with rich blue flowers, will also make a hedge of this kind.

Fruitful Screens.

After considering all the serious hedges, it is pleasant to turn to others not so serious—to the temperamental hedges, and the hedges that need a good deal of care and petting. These are generally the most beautiful of all. When good posts are placed in the ground all sorts of honeysuckles, clematis, and buddleia make good temporary hedges. Sweet peas can also be used, the morning glory convolvulus, climbing nasturtiums and canary creeper, to say nothing of hops and scarlet runner (painted lady) beans. Jerusalem artichokes provide a very imposing hedge up to eight feet high. It is true that it has to be set every year; but this practical member of the sunflower family, that very rarely flowers in this climate, provides a thick and beautiful green-leaved screen from June to November, to say nothing of the succulent tuber it is developing at the same time under the earth.

Loganberries, so good to look at and to eat, grow into a good hedge in three years, helped into form with solid uprights and wire.

There are over two hundred types of flowering shrubs that can be planted in rows to form green frames round new homes, and these can make more original effects than the orthodox hedge.

Although Autumn is the best time to plant most of the evergreens, they can also go into the ground in April and May, and even in the Winter, during a mild spell, and if the earth is soft and not too cold.

All these young plants should be cut back and then mulched very generously for the first year of growth, to help them to develop quickly. Good mulching with manure or compost compensates for poor soil and gives a real encouragement to the adolescent hedge.

Hedges should be planted in deeply prepared trenches. This encourages the roots to go downwards, instead of spreading near the surface of the ground. If the roots go down they leave the earth free near the hedge for the growth of all kinds of surface-rooted flowers and vegetables.

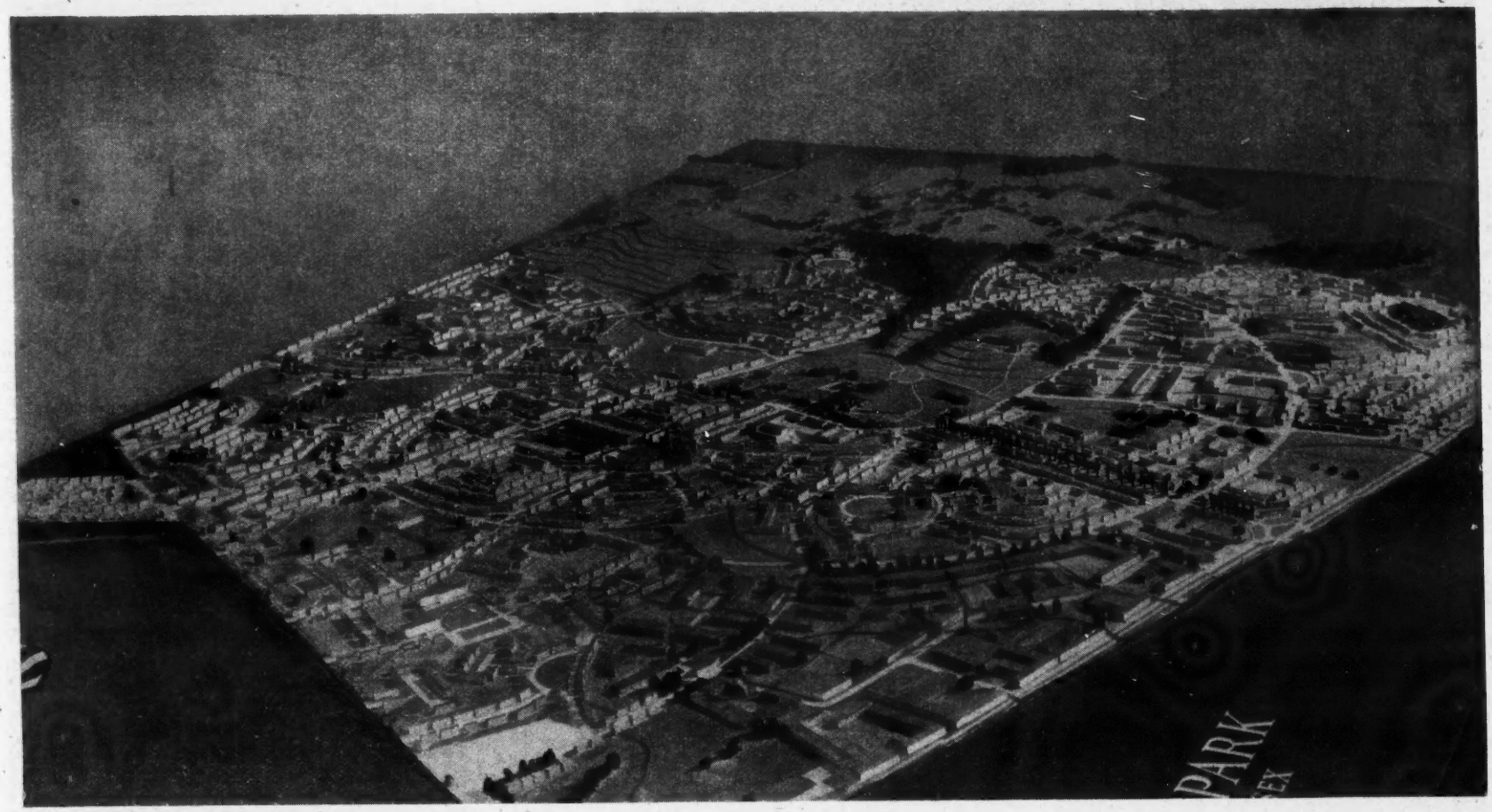
A Cottage Garden at Radlett, Herts.

R.I.C.S.

ANNUAL COUNTRY MEETING

THE first annual country meeting of the Royal Institution of Chartered Surveyors since the war will be held in Belfast from Wednesday, May 21, to Saturday, May 24. Amongst the functions arranged the outstanding events are: (a) Reception by the Lord Mayor of Belfast, Alderman W. F. Neill, M.P., J.P., F.A.I., at the City Hall on Wednesday, May 21; (b) a paper read by Professor E. Estyn Evans, D.Sc., M.A., M.R.I.A., on "Town and Country in Northern Ireland" at Queen's University on Thursday, May 22; (c) Reception by the President of the Royal Institution of Chartered Surveyors at the Grand Central Hotel on Thursday, May 22, followed by the annual country dinner, to which Their Excellencies Vice-Admiral the Earl Granville, K.C.V.O., C.B., D.S.O., Governor of Northern Ireland, and the Countess Granville have accepted an invitation.

During the meeting there will be excursions to places of interest and beauty in Northern Ireland. Further particulars regarding the Meeting may be obtained from the Secretary, the Royal Institution of Chartered Surveyors, 12, Great George-street, Westminster, S.W.1.



L.C.C. HOUSING ESTATE, DAGNAM PARK

Shown on this and facing page are the L.C.C.'s proposals for the development, at a cost of over £17 millions, of a site of 1,455 acres at Dagnam Park, Romford, Essex, as a housing estate. It is proposed to erect on the site about 7,100 houses and 600 three-storey flats, a total of 7,700 dwellings, which will accommodate about 27,700 people. This will eventually be increased to 8,566 dwellings, accommodating about 30,800 people. The development will include a proportion of the larger types of houses intended for the higher income groups, thus providing for a wider social range of tenants than on the Council's pre-war estates. Some 367 acres at the north-east will be allocated to the "Green Belt." In addition, there will be 74 acres of public park, recreation grounds and woodlands, etc. Twelve schools will be built on the estate and sites provided also for shops, community and health centres, refreshment houses, cinemas and car parks, churches, libraries and clinics. The whole site will be divided into three neighbourhood units, each with its own shopping centre and communal facilities. Eighty acres in the south-western part of the site will be used for industry, and there will be a tree-planted strip as a buffer between this area and the main housing development. The Housing Director and Valuer is Mr. C. H. Walker, L.R.I.B.A., F.S.I.

DAGNAM PARK
ROMFORD, ESSEX.
L.C.C. HOUSING ESTATE.
GREEN BELT.
SCHOOLS
DUCK WOOD
SCH. 1
SCH. 2
SCH. 3
SCH. 4
SCH. 5
SCH. 6
SCH. 7
SCH. 8 & 12
PUBLIC HOUSES
SHOPS
INDUSTRY
ESSEX COUNTY COUNCIL
LONDON COUNTY COUNCIL

COMPETITION

FOR FIFE COUNTY BUILDINGS EXTENSION

ASSESSOR'S AWARD AND WINNING DESIGN

THE assessor, Mr. A. G. R. Mackenzie, F.R.I.B.A., has made his award in the competition (limited to British architects resident in Scotland) for alterations and extensions to the Fife County Buildings, Cupar, as follows :—

1st (premium £500) : John Needham, Dip.Arch.(Leeds), A.R.I.B.A., 315, Kingsway, Dundee. (Design No. 17.)

2nd (premium £300) : Ian Brown Kinnear, Dip.Arch.(Edin.), A.R.I.B.A., 20, Queen's-gardens, St. Andrews, Fife. (Design No. 24.)

3rd (premium £200) : James Miller, R.S.A., Son and Manson, 15, Blythswood-square, Glasgow. (Design No. 10.)

There were 29 designs submitted, one being disqualified.

The winning design, the assessor's report and extracts from the winner's report now follow.

Assessor's Report

DESIGN No. 17.—I have no hesitation in placing No. 17 first. The report accompanying the design gives a clear appreciation of the problem, and the plans illustrate a remarkably successful solution to it. I think your Council are fortunate in obtaining, as a result of this competition, such a fine design, and that when it is carried out they will find themselves conveniently accommodated in a very attractive manner, while the town of Cupar will have acquired a building of considerable architectural merit, as a starting point for the future development of the river front. No attempt has been made to reproduce the old work in detail, but the additions, as designed, harmonise in mass and height with the existing, and have the same vertical fenestration.

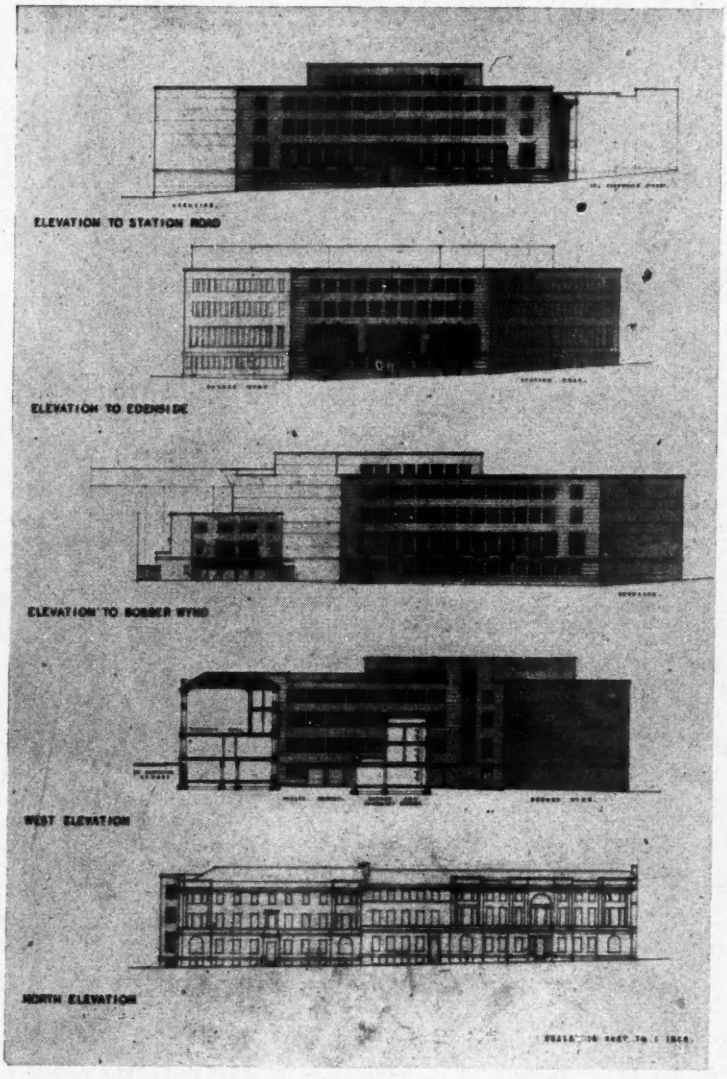
All the accommodation asked for has been provided, and I am of opinion that, on the basis laid down in the conditions, the building could be erected for the estimated cost of £232,221. Among the features deserving special commendation I would draw attention to (a) the general layout of the plan giving ample light and air to all parts; (b) the convenient and seemly arrangement of the council-chamber suite which, unlike the other plans submitted, has been placed on the upper ground floor; (c) the planning of the assembly room suite as a separate unit with a wide staircase forming a worthy approach to the fine old assembly rooms.

For the consideration of your Council in consultation with the winning architect, I would make the following suggestions : (a) that the building should be set farther back from Station-road to give more space for cars drawing up at the main entrance; (b) that the council chambers could with advantages be slightly reduced in size; (c) that the planning of the sub-divisional police station, Cupar, should be reconsidered, particularly with regard to the entrances and direct access for prisoners to the Sheriff Court.

DESIGN No. 24.—This design is planned on the same ample lines as No. 17, taking advantage of the frontages to the park and the river. It is a question, however, in view of the traffic, whether the placing of the main entrance at the junction of Catherine-street and Station-road can be justified. The elevational treatment following and the main lines of the existing building is undoubtedly skilful. Neither the council room nor the assembly room suites are as conveniently placed as in No. 17. The accommodation asked for is rather more fully provided than required by the conditions. The estimated cost, £349,980, is, I consider, placed at an unnecessarily high figure.

DESIGN No. 10.—A very straightforward workable plan, with excellent intercommunication between all the departments, but the site (as in many of the other plans submitted) has not been developed to the best advantage in relation to its surroundings; and too many important rooms face internal areas. I consider that with the exercise of economy the estimated cost, £224,400, would comply with the conditions.

None of the other designs by themselves give a completely satisfactory solution, but, taken as a whole, they present an exhaustive study of the problem of meeting your Council's requirements as envisaged in the conditions.



WINNING DESIGN. JOHN NEEDHAM, Dip.Arch.(Leeds), A.R.I.B.A., ARCHITECT.

Winner's Report

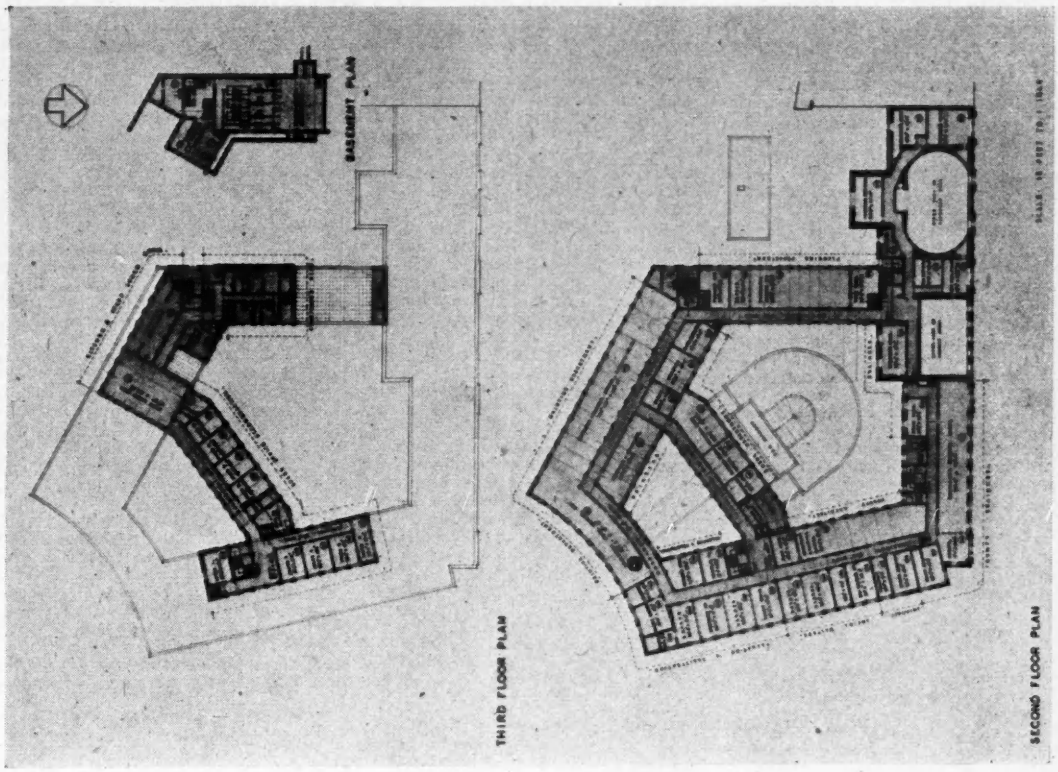
Following are extracts from winner's report :—

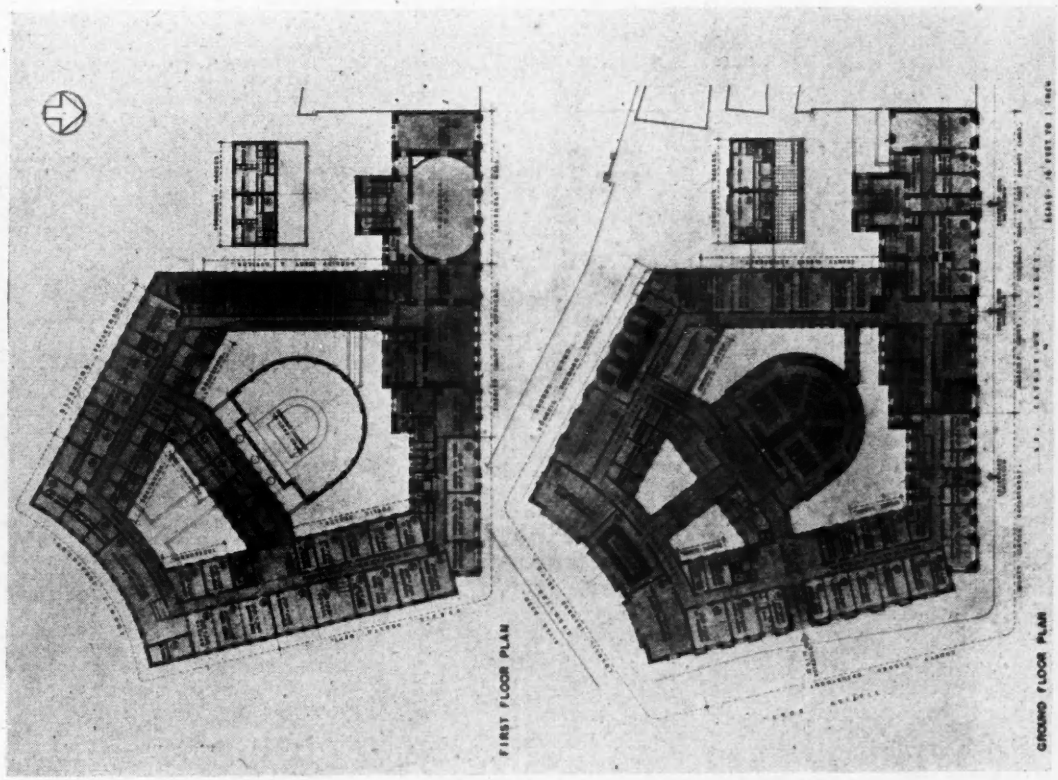
In analysing the general planning problem and preparing a solution, a few important considerations have strongly influenced the design. These are :—

1. St. Catherine-street is a very busy main thoroughfare, with resultant congestion and noise. For these reasons it was considered essential to take the main entrance to the additions away from this street and also units requiring conditions of quiet, such as council chamber and committee rooms.

2. Advantage should be taken of the amenities afforded by the Park and the River Eden, the latter offering opportunities which careful town planning could greatly develop in the future, to plan important rooms, i.e., heads of departments, committee rooms, etc., so that this amenity is enjoyed to the full.

3. The part of the building fronting Edenside and the realigned Bobber Wynd enjoy the best aspect, so rooms which require maximum sunshine such as council-





COMPETITION FOR FIFE COUNTY BUILDINGS EXTENSION, CUPAR: WINNING DESIGN. JOHN NEEDHAM, Dip. Arch. (Leeds), A.R.I.B.A., ARCHITECT

lors' lounge and councillors' dining-room, should be placed there.

4. The existing council chamber is to be used solely as an assembly hall in the future. It was considered desirable, therefore, to keep this assembly-hall suite as a distinct separate unit so that its use would not interfere with the use of the remainder of the building.

5. A complete and continuous circulation is desirable on all floors, which has led to the adoption of a quadrangular plan. Advantage has been taken of the two different floor levels in the existing building to give greater height in the additions to the ground floor containing the important council-chamber suite and the county clerk's department. A floor-to-floor height of 14 ft. 3 in. is thus obtained for this floor, except at the west wing where by coming up to the higher level near the staircase at the Bobber Wynd end, the increased height is obtained for the garage, motor-patrol room, etc., on the lower ground floor.

6. The additions must harmonise with the existing building which it is considered possesses such aesthetic merits as to ensure its retention. This should not mean, however, the reproduction of the elements of its early 19th-century façade on the additions, but rather there should be a general harmony of mass and proportion. This is best achieved by keeping a similar building height with the resultant regular skyline, and by the general vertical proportion of its fenestration being followed. With this in view, all the accommodation required has been planned on floors at the same levels as the existing ones, with the exception of a small third floor over the central mass.

GROUND FLOOR: The main entrance, fronting Station-road, leads directly through a spacious entrance hall to the council-chamber suite. The only way to ensure perfect acoustic conditions for the council chamber is to remove it from all external noise nuisance. This isolation has been given. The horse-shoe layout of seating for members has been adopted as this gives best vision and control. The pilaster treatment to the walls, with, it is suggested, the coat of arms of the principal county towns between them, would give a dignity befitting such a room. The detailed acoustical treatment of the chamber has been carefully considered. The side walls will be highly absorbent, covered with acoustic tiles, the breaks of the pilasters assisting in the diffusion of any sound that may be reflected. The ceiling acts as the main reflector, ensuring adequate loudness and evenness of distribution of sound to all seats in the room. A period of reverberation of approximately 1.6 seconds for a quorum and 1.3 seconds when the council chamber is full would be achieved. Linking the council chamber to the three committee rooms which enjoy sunshine and overlook the river, is a spacious ante-room and lobby.

LOWER GROUND FLOOR: Use has been made of the slope in the site to gain separate entrances on this floor to departments requiring direct access from the street, such as the post and registry section, motor taxation department and police department. All the police department is so located as to have easy access to the Sheriff Court and offices.

FIRST FLOOR: As little disturbance as possible has been made to the Sheriff Court and its offices which are, mainly on this floor, but the opportunity has been taken to improve some of the detail planning. The departments requiring to be in close proximity to the county clerk's department and also to have easy access from the main entrance for the public, namely, public health department, county treasurer, education department and factoring department, are planned on this floor.

SECOND FLOOR: The remaining departments, those not visited much by the general public, are on this floor.

THIRD FLOOR: On this floor are the ten spare rooms for office accommodation, the staff dining-room, kitchen and caretaker's flat.

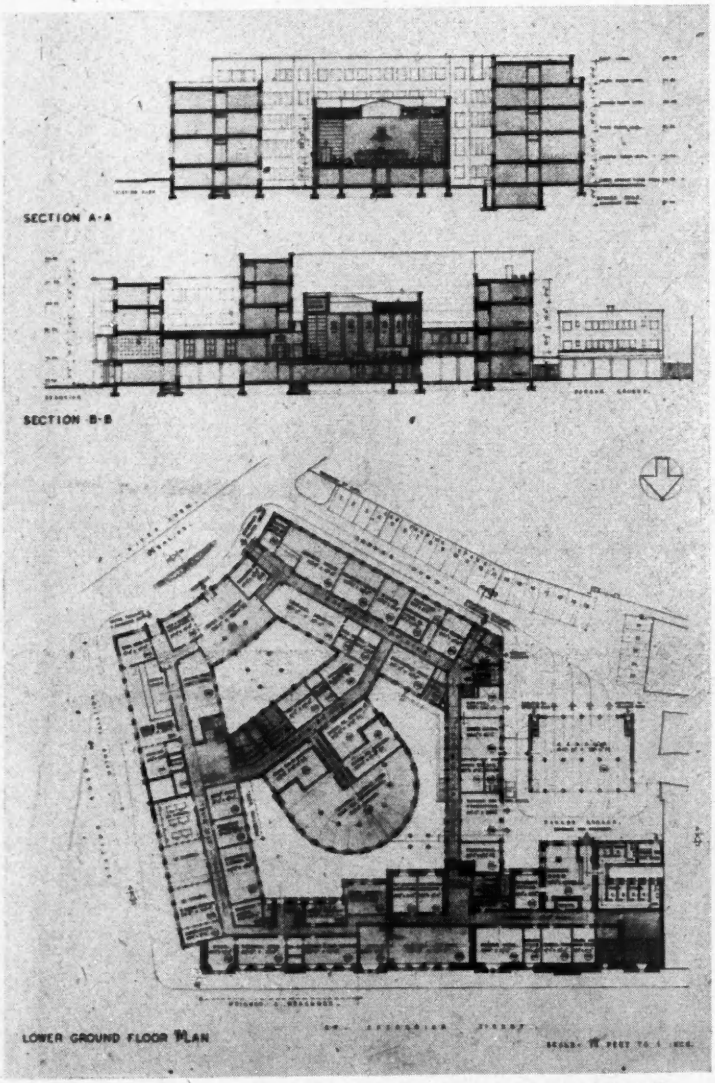
BASEMENT, HEATING CHAMBER, ETC.—The heating chamber has been placed in the basement to facilitate good circulation throughout the building. Heating will be by accelerated hot-water system, and for this three boilers with automatic stokers will be installed giving a flexibility of arrangement for any repairs or breakdown of any boiler. Ventilation to all offices will be by natural means, but the ventilation of the council chamber will be assisted by fans.

CONSTRUCTION AND MATERIALS: The structure is a steel framework with hollow-tile floors and fire-resisting construction throughout. The external facings are to be in selected stones to accord with the general character of the existing building. The stone would be used primarily as a veneer and expressed as such. Up to string-course level, joints would be deeply channelled to harmonise with the rusticated ground floor on the present structure; above that the slabs would be ashlar. Partitions between rooms, where not required to be glazed, would be of hollow-tile construction with high fire-resisting and insulating properties. Special precautions would be taken in the design of the partitions adjoining "quiet" rooms, such as the committee rooms, to overcome transmission of sound. At such points, floating floors would also be used to avoid any trouble from impact noises from the rooms above.

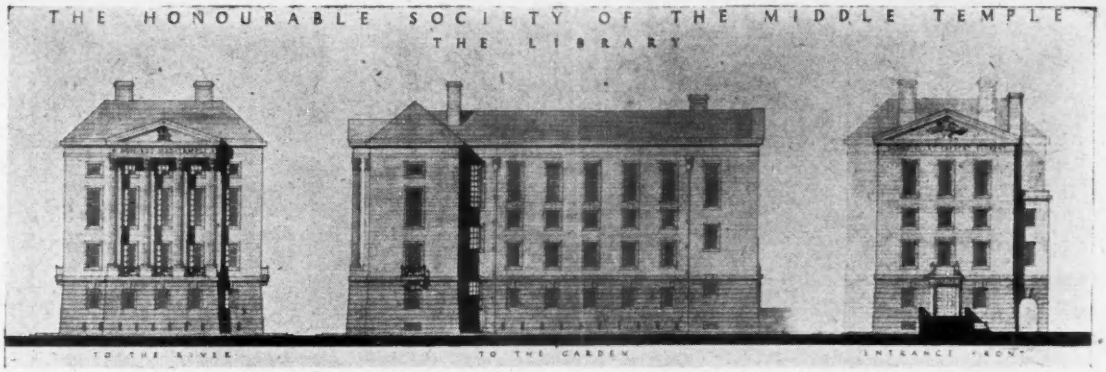
Ducts are provided above all corridors for the efficient location of all services and for easy inspection of them. External walls to the courtyards would be faced with a light-grey brick in the place of stone facing. Internal wall finishes would be hard plaster generally, with tile or terrazzo to lavatories.

COST: The summary of total costs (at 1939 level), plus 75 per cent., exclusive of architect's fees, equals :—

	£
Additions	221,599
Alterations	7,350
Layout	3,272
	£232,221



WINNING DESIGN. JOHN NEEDHAM, Dip.Arch.(Leeds), A.R.I.B.A., ARCHITECT.



R.A. Exhibition, 1947. Drawn by A. C. Layfield.

NEW LIBRARY
for the Honourable Society of the Middle Temple

EDWARD MAUFE, A.R.A., F.R.I.B.A., ARCHITECT

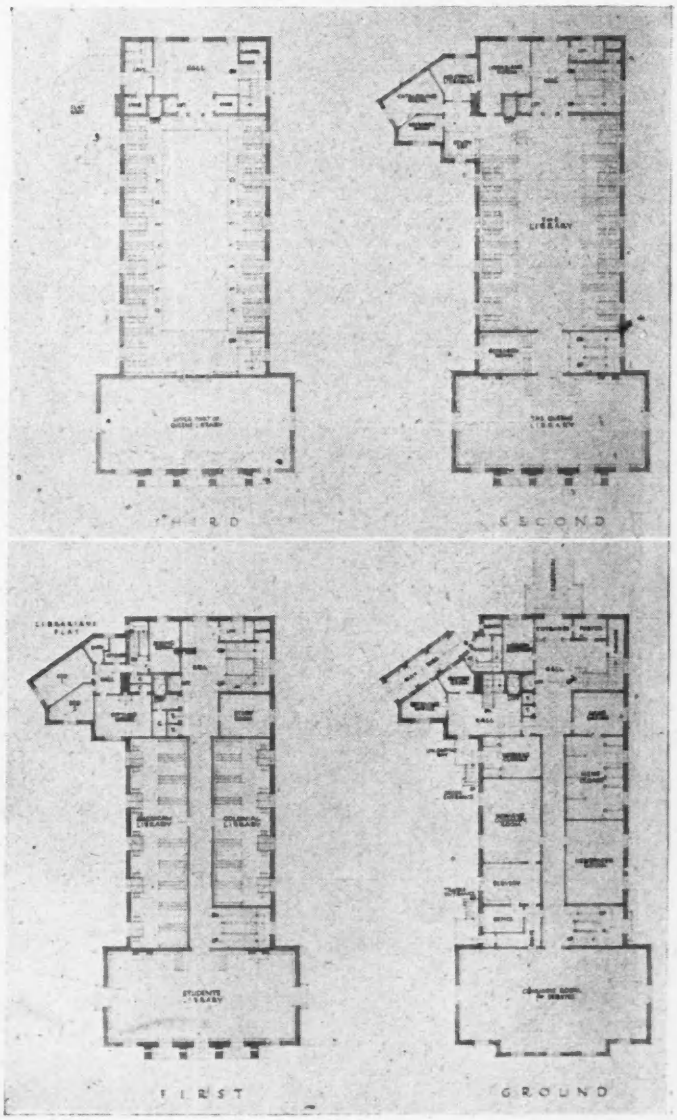
CLYDE YOUNG, F.R.I.B.A., CONSULTANT ARCHITECT

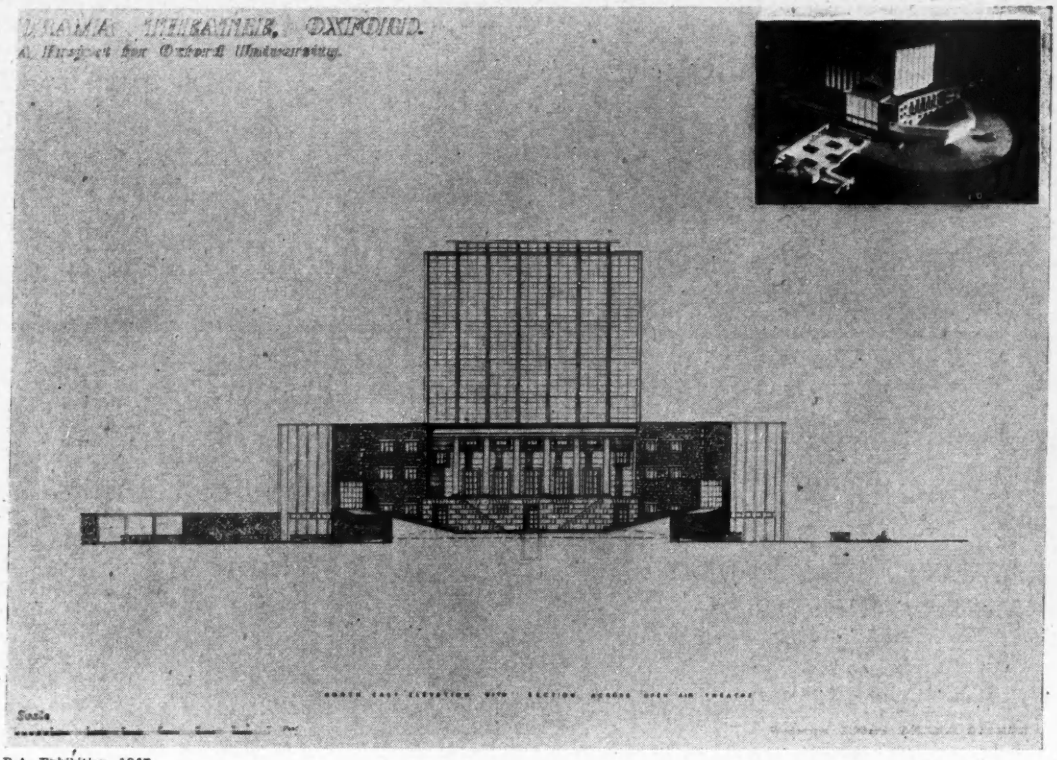
THIS BUILDING IS TO TAKE THE PLACE OF the Middle Temple Library, several times damaged during the war, and finally destroyed by one of the last of the V1 flying bombs. The old Library (1860) was designed by Henry Abrahams, being a Gothic structure of fine shape, but largely impractical for its purpose as a library.

The new Library will occupy the old site, but will come forward to line up with Edward Barry's Temple Gardens building (1879). Though the great brick tradition of the Temple is fully appreciated, this particular building becomes a London problem, for it will take its place in a river frontage of great stone buildings stretching from the Houses of Parliament, including especially Somerset House, to Barry's stone Temple Gardens beyond it. Thus the new Library is to be of Portland stone, and its main masses acknowledge Somerset House and line up with Temple Gardens.

The ground floor consists chiefly of common rooms and cloakrooms. The first floor contains the special libraries—the American Library, the Colonial Library, and the Students' Library, together with a residential flat for the Librarian. On the second floor is the Library itself, arranged on the study bay principle, with the Queen's Library, a magnificent double-cube room, looking over the river. Above, again, is a hall for special book exhibits with more study bays arranged on side galleries over the main library. Not only the three great south rooms, but all the study bays have fine views over the gardens and the river. There are two floors of stack-rooms in the basement. The building provides accommodation for 200,000 books.

Mr. Clyde Young, F.R.I.B.A., is acting as consultant. The sculpture is by Mr. Alfred Hardiman, R.A.

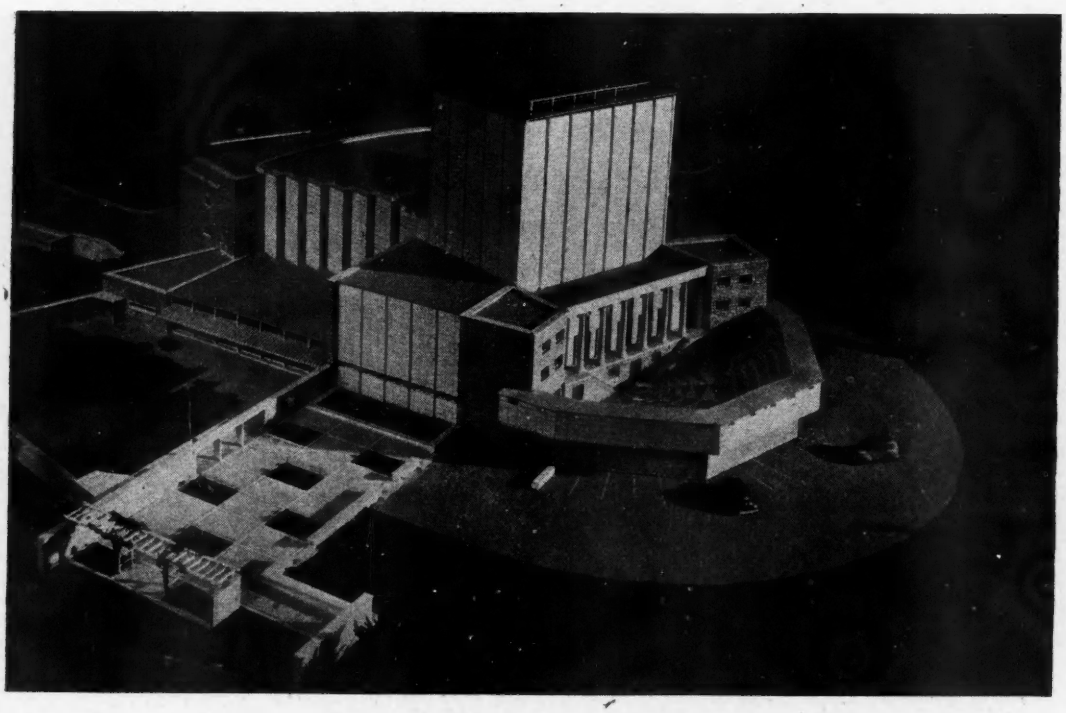


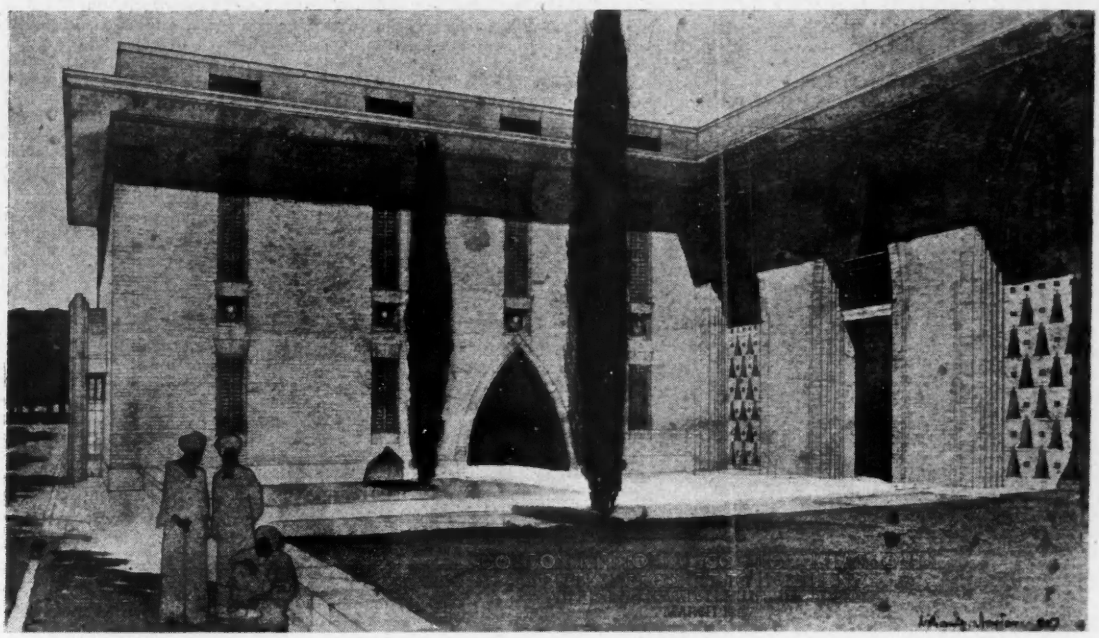


R.A. Exhibition, 1947.

DRAMA THEATRE, OXFORD: A PROJECT FOR OXFORD UNIVERSITY

FREDERICK GIBBERD, F.R.I.B.A., A.M.T.P.I., ARCHITECT

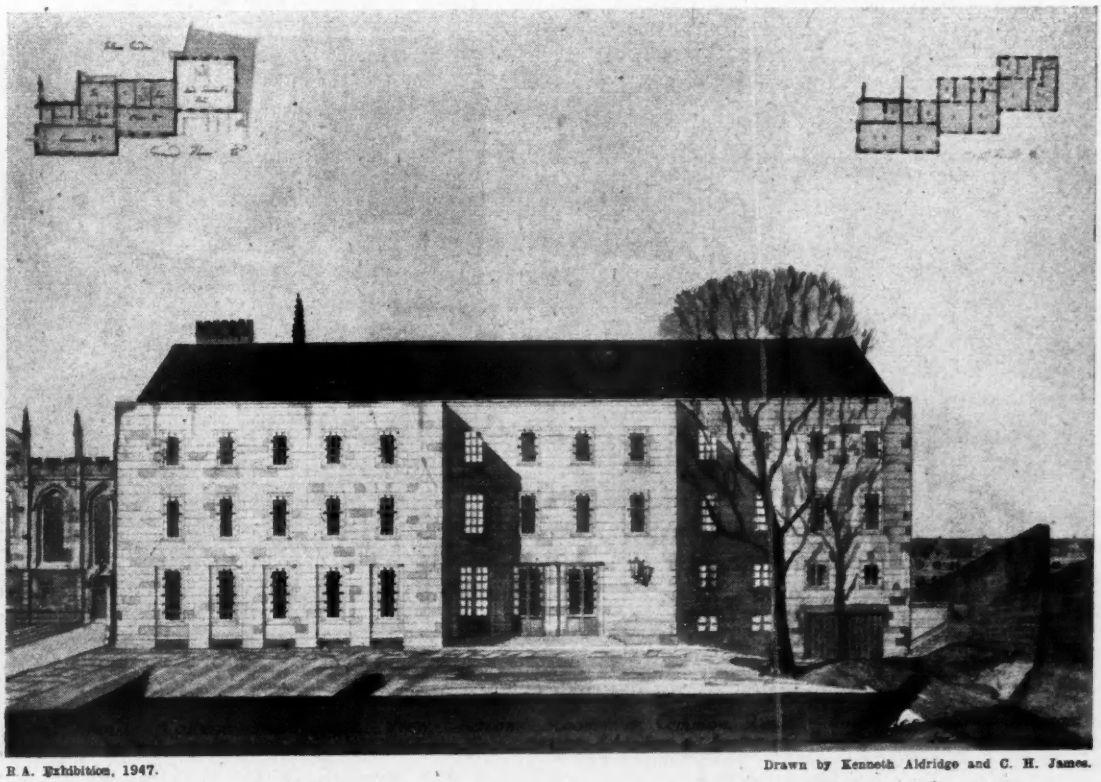




R A. Exhibition, 1947. Drawn by W. G. Newton.

ENTRANCE COURT TO A HOSTEL, GORDON COLLEGE, KHARTOUM

WILLIAM G NEWTON. M.A., F.R.I.B.A., ARCHITECT



R A. Exhibition, 1947. Drawn by Kenneth Aldridge and C. H. James.

ADDITIONS TO ALL SOULS COLLEGE, OXFORD : LOOKING INTO WARDEN'S GARDEN

C. H. JAMES, R.A., AND BYWATERS AND ROWLAND PIERCE, ARCHITECTS

CHARLES CANNING WINMILL

THE relatively few architects who ever achieve the posthumous honour of a published biography* are generally famous and successful practitioners, Royal Academicians and Presidents of the R.I.B.A. Charles Winmill (1865-1945) was none of these things, and the reasons for his canonisation are presumably to be found in the filial piety of a devoted daughter and in the warm appreciation of the publishers for a man who, during the last twenty years of his long life, faithfully maintained their interests by designing and supervising their various buildings.

For the greater part of his working career, from 1892 until his retirement in 1923, he was employed on the architectural staff of the L.C.C., at first on housing and then, from 1898 onwards, on fire stations; and his most important building was the handsome fire-station in Eton Avenue, St. John's Wood. As for private practice, there was very little of that before he retired, and thereafter it was limited to a few houses of medium size, several restorations of old churches (of which Chingford Old Church was the chief), some work at Pugin's famous monastery of St. Augustine at Ramsgate, and various buildings for J. M. Dent and Sons.

The main interest of the book, to any reader who never knew him personally, is the light it sheds upon certain aspects of architectural life in London from about 1890 to 1914. The circle in which Winmill moved was dominated by Philip Webb, Lethaby and Weir. It supported and indeed inspired the Art Workers' Guild and the S.P.A.B., and in the work of the latter body Winmill took a prominent and valuable part. The mechanical age had not yet arrived in all its fury, and England was still delightfully English. Architecture, too, was still English and still an art, not an alien ideology. Winmill and his friends went off happily to sketch old village churches simply because they liked it; and this unusual and obviously very human man not only started to learn country dancing at 60, but bought a new bicycle at 75, so that he could resume the sketching-tours of his earlier days. Simply told and well illustrated, this is a refreshing if nostalgic book. Incidentally, it recounts an unexpected and intimate anecdote of Winston Churchill as an obstreperous small boy. M. S. B.

* CHARLES CANNING WINMILL: AN ARCHITECT'S LIFE. By his Daughter. pp xvi., 148. Illustrated. J. M. Dent and Sons, Ltd. 15s. net.

SCULPTURE AT THE ROYAL ACADEMY

NOT within our recollection have there been fewer exhibits than are seen this year of sculpture intended for the embellishment of buildings of architectural character. No doubt this is due to the restrictions placed on buildings not considered absolutely essential in these austere days. Dominating the exhibition are small compositions such as busts, torsos, animals, and a few pieces of sculpture suitable for garden decoration. The few exhibits of importance include Nos. 1156 and 1159, cast-bronze decorations for s.s. *Queen Elizabeth*, by Maurice Lambert, A.R.A. These groups form a good pattern and embody in their design spirited female figures amidst a composition of anchors, a chain, a sea-serpent and dolphins. No. 1256, by Alfred Hardiman, R.A., a model of a memorial fountain to the late Lord Southwood, is in stone with bronze figures, and is to be erected in the Garden of Remembrance at St. James's, Piccadilly. The design is pleasing in its composition, and its scale and layout would appear to be correct in their relative proportion to the church, but the little figures look too small. Professor A. E. Richardson, R.A., is the architect for the general design. This was illustrated in our last issue.

In No. 1244, Madonna and Child, in Hopton Wood stone, by Allan Howes, breadth of handling and the treatment of the drapery make a strong appeal. No. 1252, by Percy Portsmouth, model of a part of a scheme for a memorial, is treated in a traditional manner; the bronze female figure having a restful and pleasing grace. The stone setting is the least satisfactory part. No. 1165, Resting Fauns, by Josephina de Vasconcellos, is a group in Stainton dapple stone. To visualise and execute this composition from such an irregular-shaped piece of stone is a great artistic achievement. No. 1200, the Black Madonna, a statuette group, by Constance A. Parker, is unusual; it is a Negroid type, with child, strongly modelled. There are many busts of persons of distinction, but the bronze one of Sir Alfred Munnings, A.R.A., by E. Whitney-Smith (No. 1167), is outstanding in its simplicity and alert expressiveness.

BOOKS RECEIVED

MODERN BUILDING MATERIALS. By M. A. Shute, F.R.I.B.A., M.I.Struct.E. (London: Sir Isaac Pitman and Sons, Ltd.) Price 18s. net.

THE VITAL FLAME. By Compton Mackenzie. (London: Frederick Muller, Ltd.) Price 12s. 6d. net.

SIR ALFRED J. MUNNINGS, K.C.V.O., P.R.A.:
Bust in Bronze.
E. WHITNEY-SMITH, SCULPTOR.

MADONNA AND CHILD (No. 6):
Statuette Group in Hopton Wood Stone.
ALLAN HOWES, SCULPTOR.

CORRESPONDENCE

Bankside Power Station.

To the Editor of *The Builder*

Sir,—At the meeting of the Council of the Royal Institute of British Architects held to-day [May 6], the decision to proceed with the erection of the generating station on Bankside was fully considered. Without questioning the ability of one of our greatest architects to design satisfactorily a building of this nature, the Council recorded unanimously their grave concern that the project was to be proceeded with in face of the strong opposition expressed by the Dean and Chapter of St. Paul's, the London County Council and the other local authorities concerned.

The views of the Royal Institute have been conveyed to the Minister.

L. H. Keay,
President, R.I.B.A.

London, W.1.

Trades Unionism—A.B.T. and R.I.B.A.

To the Editor of *The Builder*.

Sir,—Mr. Walker's letter in your issue dated May 9 is particularly misleading in one point. The suggestion that the A.B.T. or some of its members are associated with practices akin to Fascism is completely wide of the truth. May I remind your correspondent that the organisation and policy of the A.B.T. is planned and formulated exclusively by democratic methods, in which all members are free to play their part. Is it not clear that when a policy has been agreed by a majority it is the duty of *all* members to abide by it? By all means let dissentients fight for changes *within* the organisation, but it is wrong to propagate for such changes publicly.

No organisation, professional or trades union, can effectively function unless it adopts the procedure and conditions I have outlined.

Bernard Collins,
Hon. Secretary,
Manchester Branch, A.B.T.

4, Anne-street, Manchester.

Buildings and Natural Lighting.

To the Editor of *The Builder*.

Sir,—May I draw attention to some strange errors in the lecture on the above subject at the Housing Centre on April 15 by Mr. Kennedy, of the Ministry of Town and Country Planning, reported in your issue of April 25? They raise doubts as to how far, if at all, the lecturer was authorised to speak officially.

For example, it is stated that "for a room to get one hour of (possible midwinter) sunshine, its orientation must be between E.N.E. and W.S.W." Surely this should be between E.S.E. and W.S.W. A very material difference when planning for orientation.

The daylight factor is described as being measured "at a given point, usually 2 ft. 9 in. from the window." The latest (1939) international definition of the daylight factor requires it to be measured at a point 2 ft. 9 in. from the *floor*.

The well-known large increases in standards of natural lighting recommended in the D.S.I.R. Report on the Lighting of Buildings (Post-War Building Studies No. 12), attributed by the lecturer to the Lighting Committee of the Ministry of Works, are stated to be regarded by unspecified scientists as insufficient. No mention is, however, made of the somewhat material fact that, as regards schools, these recommendations have been officially discredited by the subsequent Statutory Regulations of the Ministry of Education, not for inadequacy, but the reverse, the only recommendation as to schools which is not disregarded being reduced (Regulation No. 39) by no less than 60 per cent.

Percy J. Waldram.

113, Whitchurch-gardens,
Edgware.

*** In reply to the foregoing letter, Mr. Kennedy writes: Generally, the Lighting of Buildings report referred to in the talk is the Ministry of Works publication, Post War Study, No. 12, and is the report of the Lighting Committee of the Building Research Station of the Department of Scientific and Industrial Research.

Paragraph 2, line 11, of your report should read: "The effective sunpath was approximately 90 horizontal degrees, and, for a living room to obtain possible midwinter sunshine the orientation is limited to a range of something less than the remaining 270 degrees, say, 225 degrees, that is between the extremes of east-north-east and west-north-east."

Paragraph 2, line 30, should read: "Accordingly, the Ministry of Town and Country Planning was likely to limit its recommendations on the sun lighting of dwellings to ensuring that the living room," etc.

In paragraph 4, line 5, the word "window" should read "floor."

Basic Rates in Tenders.

To the Editor of *The Builder*.

Sir,—I read with considerable interest the letter published in *The Builder* for May 2 on the above subject.

I strongly endorse Mr. Bole's observations and I think that the R.I.B.A., the R.I.C.S., and the National Federation of Building Trades Employers should have made strong recommendations on this subject a long time ago.

We have had many experiences during the last 12 months on the subject of Mr. Bole's letter and there must have been hundreds of prices obtained by our estimating department in connection with tenders which could have been avoided if Mr. Bole's suggestion had been followed. Other contractors must, of course, have been doing likewise, and yet we are told that our national shortage is labour, and in addition that paper is in short supply!

I also agree with Mr. Bole that by this method there is the unfair position which arises when only the bills of quantities of the lowest tender are requested for checking. Does Mr. Bole know that it is now the practice of some surveyors to ask for the bills of the three or four lowest tenders for the purpose of comparing basic prices? Whilst this, to some extent, overcomes the objection raised I think that it is entirely against the accepted principle that in tenders limited to selected firms the lowest tender should be accepted.

R. B. Burden,
Managing Director,
R. B. Burden Ltd.

Hounslow, Middx.

HOUSING RETURNS

Government Abandon 1947 Target: Concentration on Completion of Houses under Construction

In a White Paper,* issued on May 8, the Government's decision to abandon the target of 240,000 completed houses by the end of this year is announced. The phenomenal severity of the past winter and shortage of timber are the main reasons advanced for this step. The White Paper states:—

In the published Housing Programme for 1947 (Cmd. 7021), it was pointed out that production during 1947 was dependent on many uncertain factors, and special reference was made to the supply of fuel for production and transport and to the dependence of the programme on adequate supplies of timber. Despite the improvement in supplies which the Government have secured, the timber situation is still acute. Until further supplies are obtained as a result of the intensified action which will continue to be taken, timber must continue to be a main limiting factor in the total number of houses which can be built. Moreover, in planning the best use of the national resources, housing is not the only priority service which calls for scarce materials. The basic industries and electricity and transport are substantial users not only of fuel, but also of the same materials as housing, and a fair balance has to be struck. Last and most important are the effects of a phenomenal winter which have already manifested themselves in time lost on the site and even more seriously in the production of building materials. The effect upon the supply of materials must continue to be felt for some months to come.

Because of this continuing loss of production, it is not possible to assess precisely the total effect upon the housing programme, but it is undoubtedly very serious indeed. The Government, therefore, after reviewing the position, think it right to let Parliament and the country know at once that there seems now to be no possibility of securing during this year the 240,000 completed houses which was a reasonable estimate when the housing programme for 1947 was published.

The Government also desire to indicate what steps they propose to take in regard to the execution of the housing programme. The full national housing needs will be met as fast as resources available will allow them to be met, and the Government will press on with the policy announced in the published White Paper of securing the greatest number of completed houses as quickly as possible and of ensuring a balanced programme for the future.

In the published Housing Programme for 1947 it was postulated that for the continuous and ordered development of the programme during 1947 the number of houses in tenders approved and licences issued by the end of 1947 should reach a total of approximately 600,000 in the post-war programme for Great Britain. Of this total it was estimated that approximately 300,000 should have been completed, 200,000 would be under construction and 100,000 would be in tenders approved or licences issued, but not yet under construction. It was considered that any larger numbers than 200,000 and 100,000 would represent a lack of balance in the country's building operations and the figures at these two stages still stand as the Government's objective.

At the end of March, 1947, there were 218,783 houses under construction and 130,520 houses approved but not yet under construction. These figures of houses approved and under construction are evidence of the success in getting the programme under way. The margin by which they exceed the December objective is appropriate in the earlier months of the year during which it is usual for more houses to be started than finished. To maintain a balanced programme as the year proceeds, however, the number of houses completed month by month must first be brought up to, and then beyond, the number of new approvals given and new houses started. This number of new approvals given month by month must, therefore, be carefully related to the building progress which is made. Because the hold up in the first three months of the year has been greater than could reason-

* Cmd. 7113 Housing Returns for England and Wales, March, 1947, Stationery Office, 10d. post-free.

ably have been anticipated, the rate at which new tenders can be approved during the rest of the year must, therefore, be reduced to the extent necessary to maintain a balanced building programme and so avoid the dissipation of labour and materials over too many houses.

Zonal Conferences Held.

Zonal conferences were held in all parts of the country in February and March in accordance with the procedure described in the Housing Programme for 1947. These conferences considered the number of houses likely to be completed by the individual local authorities by the end of 1947, together with the number of additional houses which might be put in contract by the authorities during the course of the year. There is no intention of disturbing the allocations of houses thus made to local authorities. There is no question of preventing any local authorities from building houses which they can, in fact, build. In order, however, to assist them to build as many houses as possible this year the entry into new contracts which would hamper the speedy completion of houses already under contract must be avoided.

Estimates of the number of houses to be completed by each local authority in 1947 were made at the conferences held during February and March. These were based on the national total of 240,000 which was given in the published housing programme. Detailed estimates of the number of houses to be completed by each local authority in England and Wales are being published in Appendix B of this Return. For the reasons given above, the national total cannot now be achieved. Some local authorities may be able to achieve their local figures, but it is only fair to local authorities in general to make it clear that because of the disastrous effects of the winter the majority of them cannot be expected to do so.

The Government consider that it would be undesirable to attempt, at this stage, an alternative estimate of the number of houses likely to be completed before the end of the year either in total or for the individual districts. The object must be to complete this year as many as possible of the 218,783 houses already under construction. The Government are sure they can rely on the fullest co-operation of the building industry and the building materials industry to do their utmost with the resources available to them and to make this total as large as possible.

Housing in March.

The monthly figures show that in March 6,719 permanent houses were completed in Great Britain as compared with 4,432 during February and 8,824 during January. The number of temporary houses finished in March was 2,256 compared with 2,401 in February and 4,764 in January. At March 31, 180,033 houses had been completed (78,186 of them permanent) and 228,208 (218,783 of them permanent) were under construction. This represents an increase on February totals of only 2,790.

Of the 78,186 permanent houses, 39,901 have been built by private enterprise, and 1,012 by housing associations. Of the 218,783 permanent houses now under construction, 171,650 are being built either by local authorities or Government Departments.

Production figures for building materials during March include :—

	March.	*Feb.*	*Jan.*
Cement (thousands of tons)	366†	192†	550*
Plasterboard (thousands of sq. yds.)	2,780†	1,598†	3,424*
Drain pipes, salt glazed (thousands of tons) ...	31.9	27.8	39.5
Bricks (millions)	275	247	379
Plaster gypseous (thousands of tons)	13.6†	6.2†	18.7*

* 5-week period. † 4-week period.

NOISE ABATEMENT AND HOUSING

MR. BAGENAL AT THE HOUSING CENTRE

A TALK on "Noise Abatement in Relation to Housing" was given at a lunch-time meeting at the Housing Centre on Tuesday, April 29, by Mr. Hope Bagenal. Mr. Pollard was in the chair.

MR. BAGENAL said that with regard to the reality of noise problems, the best evidence was contained in the Chapman report of the War-time Social Survey. A large number of householders were asked about their noise problems, and among other things it transpired that about 33 per cent. of the people questioned complained about disturbed sleep. Noise of aeroplanes, and so on, was not taken into account, so that that referred only to ordinary noises, such as traffic, children's play, and domestic animals. This question of disturbed sleep was important, and planners would do well to pay more rather than less attention to it. Before the war, the Noise Abatement League had been established under Lord Horder. Doctors regarded the matter seriously, because only in sleep could our energies be built up again, and if our sleep were disturbed, then we should suffer from a gradual falling off of vitality.

The Chapman Survey made some valuable classifications. Distinction was made between the trouble caused by day-time noise and night-time noise which disturbed sleep, and people were questioned as to the types of noise which disturbed them, whether outdoor or indoor. Forty per cent. of the total were troubled by day noise, and 33 per cent. complained of disturbed sleep as a result of night noise. The chief day-time noises complained of were children at play (18 per cent.), road traffic (14 per cent.), and domestic animals—*i.e.*, dogs—(13 per cent.). Disturbed sleep was due to road traffic (13 per cent.), dogs (12 per cent.), and rail traffic (7 per cent.).

This related to noise from outside. There was also noise which came through the party wall or party floor. Thirty per cent. of those questioned admitted to being troubled by this in the day-time, and it disturbed the sleep of 24 per cent. at night. Door banging covered 15 per cent. of the day-time disturbance, wireless 10 per cent., people moving about (*i.e.*, footsteps, fire poking, etc.) 8 per cent., and children's play 7 per cent. The same factors, with the exception of children's play, disturbed sleep.

Certain points followed on these findings. The question of children at play he mentioned with a certain amount of compunction, but housing experts, designers and planners were all beginning to notice its effects, and to consider the matter seriously, as could be seen in papers read recently at the R.I.B.A.

Noise and Structure.

Different classes of dwellings were susceptible to different types of noise. The detached house could be ignored, though its occupants might be afflicted by the noise of traffic and dogs. The semi-detached party wall house was the British type, whether we liked it or not. It went up in its thousands, and was a form of British universal plan. One of its most serious flaws was that the living room came on the party wall, and the wireless was in this room, and therefore also near the party wall. The speaker was definitely in favour of reversing this arrangement and putting a baffle, consisting of staircase, hall, bathroom and kitchen on the party wall, so that the living rooms should be as remote as possible from each other, and the entrance halls in the centre, instead of on the outside, of the structure. This arrangement was sometimes known as the American universal plan. It had, of course, its disadvantages, because there was a certain amount of noise caused by people moving on staircases, and also from the bathroom and W.C. But he did not believe this was as maddening as other people's wireless, and he considered it desirable to pursue the principle of obtaining the maximum horizontal distance between living rooms in adjoining houses. The Building Research Station had some interesting figures in this connection which he wished they would publish, showing that the insulation in houses built on an L-shaped design, where the living rooms were very remote from each other, was something up to 70 or 80 noise units. A very great deal could be done by planning, although, of course, the question of cost had to be considered. Mr. G. A. Rose's utility house showed the reversal of the ordinary universal plan. One of the most serious weaknesses of the ordinary house, from the point of view of noise, was the bay window. But the bay window was one of the most sacred cults of our people, and he thought it impossible to rule it out, though it was obvious that bay windows of adjoining houses, opening on to one another, made it almost inevitable that noise from one room should pass straight through to the other. In some good modified plans there was a baffle wall—a prolongation of the party wall for about three feet—to combat this. One of the main complications caused by reversing the universal plan was that the tradesmen would have to go past the rear sitting-room window, which would offend the sensibilities of some people, though this was offset by distinct advantages.

The semi-detached house was now recommended to embody a dissociated party wall, and under the bye-laws there might be an 11 in. cavity. It was better to omit wall ties and provide strengthening by jams and breasting on the cross wall. Wall ties would not affect air-borne noise, but would certainly diminish the efficiency of insulation from the sound of footsteps, fire poking, and so on, in an adjacent room.

The greatest number of complaints came from people living in terrace houses, who were troubled chiefly by traffic noise, because they were often built right on the street. This type of house also needed careful consideration from the structural point of view. It was worth investigating the possibility of providing double party walls, reversing the dwellings in pairs, providing access passages, recessing living-room windows, and stepping the plan units.

Noises in Flats.

The flat versus house question was very controversial, but it seemed that there would have to be a number of flats, whether we liked it or not. Closeness to work was very important for working people. He had noticed that specially in the Midlands. In Coventry and Birmingham, people were accustomed to a different acoustic climate from our own. Working people there were inured to noise, and though sandwiched between factories were anxious not to be pushed out too far from their work. This had to be taken into account, and one thing must be balanced against another.

Flats were of three types : those with access balconies; those with separate staircases for each pair of flats, or for three or more flats; and the interior corridor type. Complaints of noise were particularly serious in the corridor type. He had

been particularly impressed by the evidence of Miss Baskett, of the Society of Women Housing Managers, who had lived in one of these blocks of flats, and was quite clear as to what was a nuisance and what was not. She believed that careful layout and design could do much to produce a quieter working-class home. Children's playgrounds should not be placed just under the windows. Blocks of flats enclosing noisy courtyards should be avoided, and she disliked the access balcony. She recommended placing blocks for large families somewhat apart from those for old people, and her evidence reinforced the findings of the Chapman Survey about the disturbance of children at play.

Balcony Access.

It was commonly agreed that the access balcony was a nuisance, and there was a movement among L.C.C. designers and others to try to do away with it. The maisonette plan would halve the number of access balconies, but it would bring bedrooms under noise sources. If we were prepared to spend money on floating floors, then this did not matter, but the cost was too great for them to be installed in every room. As it was, bedrooms in maisonettes were under corridors, living rooms and kitchens of the dwelling above, and open to the menace of impact noises such as footsteps, children pattering, piano playing, falling articles, and so on. Thus, the party floor was a more difficult problem in maisonettes than in the ordinary type of flat, where noise sources came one above the other and not above the bedrooms. One solution to this problem was to reverse the alternate tiers, so that the first maisonette consisted of access floor and upper floor, and the second of access floor and lower storey. Thus, two bedroom storeys would come together, and noisy rooms above the bedrooms be reduced by half, so that only half the number of floating floors would be required. The speaker wished to pursue this matter, because he regarded it as really important. The party floor was a real problem, and the first and cardinal point in planning and design was to ensure that bedroom should be next to bedroom, or bedroom over bedroom.

In pre-war planning, it was usual to arrange kitchen over kitchen, living-room over living-room and bedroom over bedroom, so that these acute cases did not arise. Nevertheless, there were serious complaints about the old L.C.C. 4-in. concrete floor, which was 100 per cent. susceptible to sound, and the disturbance would become intolerable if a bedroom were situated beneath a living-room. It was interesting to note that flats were tolerated in London largely because they were for the middle classes, and the floors close carpeted. If we were to attempt to have hygienic floors without carpets, then complaints would become really serious. A special type of lino or Ruberoid over thin carpet felt was a palliative which could be used now and would reduce noise.

With regard to the question of children playing, there was no doubt that anything that could be done to alleviate noise in this direction would be a real comfort. But one was up against the instinctive desire of the mother to have her children within earshot, and where she could watch them from a distance. It was for this reason, no doubt, that the London Council of Social Service favoured building round a square, with a small playground for small children in the middle. There was certainly much to be said for placing flats for old people apart from family flats. The suggestion of a play nursery, with a woman in attendance, was quite a good one. A special playground for the elder children might be situated further off from the block. There was much to be said for the idea of a playground on a top floor or railed roof. It was satisfactory accoustically, since noise would rise rather than fall.

Discussion.

MISS LARKE said that noise transmission was particularly bad in the new type of steel-frame building. Could anything be done to prevent this? MR. BAGENAL, in reply, said there was some evidence that complaints of noise were less considerable from the pre 1914-18 war buildings, and that everything depended on cost. By using steel framework and reinforced concrete, the mass of the structure would be reduced, and with it the cost. The thinner structure was cheaper, but more conducive to noise transmission. If all minimum dimensions and stresses were worked out, and then doubled, the result would be a fine sound-resisting structure. Floating floors and box structure would help, but the cost was considerable. He described a floor at the Building Research Station put down over an ordinary floor on rubber insulators, and said he considered it of the greatest importance that in flats and hostels a floating floor should be provided in at least one room.

MR. KENT raised the question of maisonette construction, and Mr. Bagenal emphasised that he was referring to large blocks of maisonette-type dwellings, in advocating reversal of the sandwich design, which would halve the number of floating floors required.

There was some discussion of the box construction to which Mr. Bagenal referred, and a visitor distinguished it from the box frame structure, which was applied to outer walls. The same speaker asked whether there was any evidence as to how much more expensive floating floors were, and whether this cost could not perhaps be offset by the longer life of the building. Mr. BAGENAL suggested contacting the Building Research Station, but believed the cost would be prohibitive for every room.

MR. ROSENTHAL asked whether half-way solutions were not worth while considering. Standards were rising, and we must see what we could do to exclude a certain amount of noise in a cheap way. He had built several blocks of flats and houses, and had found that bituminous felt, sprinkled with cork, laid beneath wood blocks, was very effective. Something similar could be done with party walls. A mixture of cork and magnesium was also effective. Obviously sleep must not be disturbed, because vitality must be maintained, but he did not believe it necessary to go to extremes of expense in preventing noise.

A speaker asked whether we could learn anything about noise exclusion from B.B.C. methods, or whether these were altogether too costly. MR. BAGENAL said that there noise exclusion had been obtained by cutting out all windows. Hollow, baffle floors were used for storing, and everything had been done quite regardless of expense.

MR. POLLARD asked Mr. Bagenal to enlarge on floating floors. Mr. Bagenal said he agreed with Mr. Rosenthal about the desirability of palliatives. He described briefly various types of sound-insulating floors. Some of the prefabricated floors he had seen appeared quite efficient and well worth doing, though he agreed with Mr. Rosenthal that there was some doubt as to whether their efficiency would last. Mr. Rosenthal considered the method he had described as cheap, effective and enduring.

Mr. Pollard said he believed considerable noise insulation could be achieved by simply placing ordinary felt on the bearings; the cost was about 15s. per house.

SELLING PRICES OF HOUSES

SOME HARD CASES

THE announcement by the Ministry of Health of February 25 (Circular 34/47) permitting an increase in maximum selling price of £100 per house, subject to an additional condition to ensure a good standard of construction and amenity, has been welcomed by house-builders as a concession to the increased costs of labour and materials.

This increase applies to licences for the erection of houses issued after the date of receipt of the Circular, a condition subsequently varied as the result of a question asked in the House of Commons by the Member for Cheltenham (Mr. Lipson) to allow local authorities to vary conditions in issuing new licences for houses previously licensed but on which building has not started. Licences, it will be remembered, automatically lapse if building work has not started within two months.

House-builders who obtained licences after December 25 last, but who had not actually begun work by February 25, have consequently been able to apply for a fresh licence under the new conditions, but considerable hardship is falling on builders who got quickly to work in those two months, and who took even the smallest preparatory steps.

A Wiltshire Case.

A case, fully documented, that has come to our attention is that in which Messrs. F. Rendell & Sons, Ltd., the Devizes builders, obtained a licence on December 30 last to erect for sale twenty houses. At February 25 the whole of the work done was the turf-stripping on two houses and the digging of foundation trenches on one—total cost £28. An application to the Borough Council on March 6 for permission to charge the £100 increase on selling price was answered, on May 2, in the negative. Because £28 worth of non-constructional work has been done on this contract this firm will lose £2,000, the greater part of which is represented by the increase in wages of January and the steady increase in materials prices.

Hard cases, we know, make bad law, but we do not think that the case quoted above is unique; many builders have found themselves in the same position. Remembering that this £100 increase was given not for profit but to cover building costs that have steadily been rising since the previous maxima of £1,300 (London region) and £1,200 (all other regions) were established, it means either that housing schemes begun just before February 25 are going to be completed at a heavy loss or possibly not completed at all. The latter situation is, from what we hear, highly likely.

Representations have already been made to the Minister of Health, both by private Members of Parliament, and by the National Federation of Building Trades Employers, but without success. We appreciate the difficulty of the Ministry of Health in drawing a line, but quite clearly injustice is being done, and, by a curious twist of fortune, to those firms in particular which have been enterprising and have got on with the job. We hope that reconsideration may be given to the matter and a discretionary ruling issued which will ease at least the more obvious hardships. Failing this, house production must suffer.

PROGRESS IN SCHOOL BUILDING

THE PART ELECTRICITY CAN PLAY

An indication of some of the factors underlying the planning of new schools in this country was given by Mr. Sidney Loweth, F.S.A., F.R.I.B.A., County Architect to the Kent County Council, when he spoke at the British Electrical Development Association's Sales Management Conference in London on Thursday, May 8.

The following extracts are taken from Mr. Loweth's remarks :—

At the present moment the Government and public are primarily concerned with the provision of houses, but it is now fast being realised that where new houses are built schools must also be provided. In point of fact, schools must be regarded as essential ancillaries to housing, and the problem of providing them is both vast and urgent.

To build quickly we should, wherever possible, standardise our plans or units of plans, and also introduce many shop-made prefabricated sections; erect single-storeyed buildings; employ as dry a process as possible in the methods of construction; adopt a time-saving means of obtaining tenders and putting the work in hand.

To build cheaply we must standardise units of construction, also fittings and equipment. We cannot afford buildings designed on the old traditional lines and veneered with expensive "pseudo-Gothic" or "Classic" ornament; they may be the "pride of the community," but they often prove a "white elephant" to the school staff. They are not for the post-war period and they are too expensive.

Flexibility is a most important factor in the design and layout of the buildings and site, and the building must be so planned and sited that it can readily conform to changing needs and be added to either horizontally or vertically (or both), or even, as an educational unit, be so refashioned as to amount to complete replacement.

It should be so constructed that the loads are carried at points in the outer walls which will permit the gutting and rearranging of the interiors without affecting the stability of the structure (*i.e.*, the interior walls should be partition walls and not structural, except for staircase, latrine, and staff-room enclosures). And this change may have to be carried out whilst the building is in occupation.

This also means that the services must be designed and provided having in mind the flexibility in the ultimate scheme. This is where electricity comes into its own.

We are fully aware that at the present time it may be very difficult in many districts to heat our buildings economically by electricity, but the time will surely come when this will be done, and in comparing such schemes with those of water heating one must fully appreciate the following :—

(a) The great advantage of being readily able to make additions and alterations to the existing services;

(b) Considerable freedom in planning is achieved by the absence of boiler and fuel-chambers, and these, together with chutes, ash-hoist and pipe-ducts, often underground and excavated in "difficult" or waterlogged soils, result in heavy capital expenses which can be avoided where electrical heating is used;

(c) The placing of the electric heating units can be so arranged as to free the wall spaces for fittings;

(d) The absence of water storage-tanks, wall channels and chasing, etc.;

(e) The elimination of the "freezing" of radiators, tanks and pipes; and the saving in cost of fuel to keep the heating apparatus running during such periods when the school is not in occupation;

(f) The "saving" of the run-in or roadway for the delivery of fuel and the removal of ashes;

(g) The "saving" of the cost of maintenance (*i.e.*, stoker's wages, painting and repairs of pipes, etc.), also in the periodic decoration of the buildings;

(h) Better heat control by means of numerous well-placed thermostats;

(i) By the elimination of the boiler-house, fuel-store, ducts, and roadway, a considerable saving in the "time of erection" of the buildings is effected.

There is considerable scope for æsthetic improvement in the design and equipment of the schools of the future, and it should be remembered that for many children the sole standard of æsthetic value and the sole criterion of beauty are those set by the school. This can be achieved without extravagance, and the same applies to the layout of the grounds as well. The effects of colour on the sub-conscious mind have seldom been appreciated. The colour schemes of each room should be different. The ceiling might be of the same colour as the walls, but of a lighter shade. The joinery, cupboards and fittings should, where possible, be finished with a brightly glazed surface (cellulose paint) in a colour to harmonise with that of the walls.

SHELTER MATERIAL FOR HOUSING

SUGGESTIONS BY MINISTRY

A letter addressed by the Ministry of Health to housing authorities draws attention to the collection and disposal of steel shelter material and the extent to which this material may be used for housing purposes.

The letter states : "The Minister is advised that many of the steel components could be used to advantage in housing work, especially as a means of saving timber and new steel. It has accordingly been agreed that local authorities may retain (either out of existing stocks not yet declared as surplus, or from shelters which have yet to be dismantled and recovered) such quantities of steel components as they are in a position to earmark at once as being required for their housing schemes. The requirements of local authorities in the London Region whose recovered shelter material is being delivered direct to a central dump, and who therefore may hold no local stock, will be dealt with as far as possible by transfer through the Home Office from other areas.

"Local authorities are strongly recommended to make full use of these facilities. The supply of timber for new houses is likely to become even more difficult during the next few months, and the Minister wishes to stress that housing progress will only be maintained if housing authorities are ready to adopt every practical means of saving timber by the use of alternative materials. The use of steel shelter material in the place of new steel sections and sheets will also help to relieve the present heavy demands upon steel production."

The items most likely to be of value for housing work are listed in the letter together with details indicating possible uses of the material in place of timber.

CANADIAN RED CEDAR SHINGLES

HOUSING CENTRE TALK

At the Housing Centre, on April 22, Mr. I. J. O'Hea described the properties of western red cedar as a building material, particularly for roofing houses. He pointed out that it was edge grain Canadian western red cedar he was to talk about, as distinct from slashed grain cedar. The slashed grain cedar, he said, was cut from the log in the same way as ordinary planks of wood, whereas edge grain was cut substantially at right angles to the annular rings of the tree. He claimed that Canadian western red cedar had properties even more remarkable than ordinary cedar.

The outstanding merits of this wood, he said, were : (1) Long life and immunity from decay; (2) resistance to the elements; (3) immunity from curling or warping after being fixed in position; (4) a high degree of insulation against heat and cold; (5) high resistance against storms, gales, hurricanes and great stresses; (6) lighter weight than traditional roofing materials; (7) safety from fire as compared with other timber roofs; and (8) cheaper than a clay-tiled roof in itself and enabling a cheaper substructure to be fitted.

The lecturer claimed that C.W.R.C. shingles were unique in resistance to decay, whether buried in the ground or exposed to the weather (as on a roof). This was chiefly because the timber contained an oil, a natural preservative, which was highly toxic to wood-destroying fungi. Research at the Forest Products Research Station Laboratory at Princes Risborough had proved that C.W.R. cedar had a longer life than oak, and other experiments had shown that its resistance to fungoid attack was greater than that of oak heart-wood. Its life was one-and-a-half times to twice that of commercial white oak. Research in the U.S.A. and Canada had corroborated results of tests made over here.

All that could happen to C.W.R.C. shingles after long exposure to the elements was that rain gradually washed the shingles thinner. He had seen C.W.R.C. shingle roofs 300 years old and they were still in excellent condition.

In Canada and the U.S.A. this form of roofing was used extensively in most of the country districts and in many towns. It might be asked, how would this material stand up to our climate? In fact, from his own experience he knew that there were greater extremes of heat and cold in North America than here, and very heavy rainfall in some parts. In Canada and the United States snow remained on the roofs for long periods. This was a severe test of the permeability of C.W.R.C. shingles, for the lowest layer of snow soon melted, and, in fact, had the effect of water running over the roof continuously for weeks on end. It had, however, no harmful effects on the roofing.

Again it might be asked, was a period of 21 years sufficiently long to test the material in this country? The answer was that there was a number of houses in this country which had been roofed with C.W.R.C. shingles for very many years. He knew of a large house near Bettws-y-Coed, in North Wales, which was roofed with this material 50 years ago. The rainfall in that part of the country was very high, yet the roofing was as good to-day as ever it was.

In a permeability test carried out at the Building Research Station at Watford (B.S.I. Test No. 402 for Roofing Tiles) a 20 cm. head of water was applied to that part of the tile which was completely exposed. The shingles came through with

flying colours and were found to be many more times waterproof than ordinary clay tiles.

C.W.R. cedar had less radial shrinkage than any other form of known conifer, said Mr. O'Hea. Due to this quality and to the way in which it was cut (the edge grain cedar) the shingles did not curl or warp after being fixed in position, but oak tended to curl at a very early stage in its life.

Claiming a high degree of insulation against heat and cold, the speaker said in one street that he knew, during the recent cold spell a bungalow roofed with the shingles was the only dwelling which did not become frozen up, and the occupier was able to supply his neighbours with water. Only one-third of each shingle fixed on the roof of a building was exposed to the atmosphere. The remaining two-thirds were covered by the overlapping of the other shingles. Resistance to heat and cold was due to the particular cellular construction of the wood. He claimed that in insulation value a one-inch thickness of C.W.R. cedar was equivalent to 12 in. of concrete, 7½ in. of brick or 7½ in. of clay tiles. In a house measuring 28 ft. by 30 ft. and 10 ft. high to the eaves C.W.R.C. shingle roofing would save £250 in fuel costs over 30 years.

It took a pull of 85 lb. to lift a single shingle. Each shingle was nailed on to the battens with two nails, but as each course was held down by two nails above and below it, it was in effect secured by six nails.

The weight was less than one-tenth that of a tile roof, so that the sub-structure could be made much lighter and needed on the average 40 per cent. less timber than the more conventional roof. This, of course, also cheapened the cost of the roof as a whole, but the cost of the actual roofing shingles, supplied and fixed, was just under that of ordinary clay tiles and just over that of concrete tiles.

As to resistance against fire, he contended that most fires which broke out in or on buildings started internally, and the fact that the roof was covered with C.W.R.C. shingles did not increase that form of fire risk. The snug fit of the shingles on a roof, due to the avoidance of warping or curling, helped greatly to minimise draughts which would fan the flames.

With regard to fires starting externally and the danger of the roof catching, it was almost impossible to start a fire with the material, which was a slow-burning wood. The lecturer conducted a test in front of the audience, using a blowlamp on a specimen section of roofing. After 20 minutes' unceasing application of the flame to one spot the timber had begun only to smoulder and the fire had not penetrated one thickness of shingle, neither had surrounding edges of the other shingles caught.

GLAZING WITH PUTTY

AGREED EXTRAS

We are informed by the National Federation of Constructional Glass Associations that negotiations with the Ministry of Works have resulted in the cancellation, as from the date of their introduction, of the following extras for glazing with putty :—

½d. per ft. super, introduced on September 4, 1946.

½d. per ft. super, introduced on February 15, 1947.

½d. per ft. super for metal casements, introduced on February 15, 1947.

The following will apply in place of these cancelled extras :—

(*a*) *Jobs not exceeding* 100 *ft. super.*

(i) From September 1, 1946, to February 2, 1947—an increase of ½d. per ft. super to cover an increase in the price of putty of £11 5s. per ton.

(ii) From February 3, 1947, to date of next increase—a further ½d. per ft. super, making 1d. in all, to cover a further increase in the price of putty of £11 per ton.

(*b*) *Jobs exceeding* 100 *ft. super.*

Schedule No. 4 rates will apply, plus an adjustment for changes in the price of putty based on actual invoiced costs.

IN PARLIAMENT

Rural Housing.

Lord Addison announced in the House of Lords that the Government were really making a special issue of the erection of rural houses, and 20,000 prefabricated Airey houses would be available by September, and 3,500 were being erected for agricultural workers. Of 5,000 prefabricated houses from Sweden, 1,000 had been erected and 1,200 were under construction. There were 42,000 approved tenders for permanent houses, of which 24,500 were under construction and 5,400 were completed.

Airey Houses.

In the House of Commons, Mr. Hollis asked the Minister of Health whether Airey houses were now available to local authorities; and whether such houses, if supplied, would be included in the local authorities' quota of houses for 1947.

Mr. Bevan said that local authorities could have additional Airey houses where production permitted and sites were available.

Exchequer Contributions.

Mr. Walker-Smith asked the Minister of Health if he had yet considered whether it was expedient that an order be made under Section 16 of the Housing (Financial and Miscellaneous Provisions) Act, 1946; and whether he intended to lay before the Commons House of Parliament a report in conformity with the provisions of the said section.

Mr. Bevan said he hoped to be in a position to make a statement on this matter in the near future.

Mr. Walker-Smith : Does not the Minister realise that the Act in question places an obligation on him to take this matter into consideration immediately after the beginning of December, 1946, and if, on consideration, he is not going to make such an Order, to report thereon to the House? Does he not agree that he is taking as long to make up his mind on this matter as he is in getting the houses?

Mr. Bevan : I am perfectly aware of my statutory obligations in this matter, and, of course, I shall conform to them. But as the housing authorities have handed over to the building industry about 100,000 more houses than the building industry can start, there is, obviously, no question at all of this delaying building.

Mr. Walker-Smith : Has the Minister carried out the consultations he must have under Sub-Section (6) of this Section? Will he give a report on it?

Mr. Bevan : Consultations have not yet started.

Mr. Sparks asked the Minister of Health what revision was contemplated in the basis of Annual Exchequer contributions as laid down in Sections 2, 3 and 4 of the Housing (Financial and Miscellaneous Provisions) Act, 1946, in the light of the provisions of the Town and Country Planning Bill.

Mr. Bevan said that in considering the review of housing subsidy, all factors affecting the estimated cost of house building during the period for which subsidy was to be fixed were taken into consideration.

Mr. Sparks : Is the Minister aware that if local authorities lose more by the reduction of subsidies than they gain by a reduction in the cost of sites, this loss must be passed on in the form of increased rent, which is rather undesirable? Can he look very closely at this matter, as anomalies are very likely to arise?

Mr. Bevan : I do not think local authorities are dissatisfied with the housing subsidy.

Housing Programme for 1947.

Mr. W. Shepherd asked the Minister of Health if he had now considered the housing programme for 1947 in the light of the industrial dislocation caused by the fuel crisis; and what effect this was likely to have on the number of houses to be built.

Mr. Bevan said the effect of winter conditions both on building and even more on the production of building materials would reduce substantially the rates at which houses already under construction could be completed and consequently at which further houses could be started this year.

Major Legge-Bourke : In view of the results of the industrial dislocation, will the Minister consider altering the targets at the zonal conferences which took place to fix the time, as the targets appear to have been fixed on a mathematical basis?

Mr. Bevan : They were, in fact, not targets at all. They were merely attempts to bring the allocations in a zonal area in reasonable relationship to the physical capacity of the building industry in that area. The allocations are not going to be affected.

Building Licences.

Sir Hugh Lucas-Tooth asked the Minister of Health whether he was aware that licences granted to private builders for building new houses were often issued to cover several houses each; that in a number of cases where such a licence was issued to a builder outside the London area before February 25, one or more of the houses included in the licence had been begun before that date while others in the same licence had not been started; that the consequent effect of the Order permitting an increase of £100 in the maximum price of houses licensed before February 25 was to make such concessions inapplicable to these houses not yet started, without any power for the local authority to vary the conditions in the licence; and whether he would modify the terms of the Order to rectify this anomaly.

Mr. Bevan said that it was open to a private builder to ask the local authority to revoke a licence in so far as it applied to houses on which work had not been started, and to apply for a new licence in respect of these houses under the revised conditions.

Baths.

In reply to Mr. Walker-Smith, Mr. J. Edwards said that approximately 410,200 baths were produced between August 1, 1945, and March 31, 1947. Assuming one bath in every house or new unit of accommodation completed since August 1, 1945, it was estimated that 313,456 had been installed.

Bricks and Brickworks.

Mr. Granville Sharp asked the Minister of Works what action he had taken, or was taking, to implement the recommendations of the First Report of the Technical Committee of the National Brick Advisory Council; how long it would take to implement the recommendations to a substantial degree; and to what extent he planned to exceed the 1946 brick production figures by 1948.

Mr. Key said that the technical staff of his Ministry, in conjunction with the staff of the Building Research Station and the British Refractories Research Association, were assisting brickmakers to implement the Committee's recommendations and he was doing his best to accelerate the provision of mechanical plant. The answer to the second part of the question depended on a number of factors including the availability of plant and the efforts of the brickmakers themselves, and he was unable to make

any definite statement. Subject to the supply of fuel and the recruitment of adequate labour he hoped that they would reach this summer an average monthly production at least equal to that of October, 1946, when the highest post-war rate of output was reached.

MR. SHARP asked the Minister of Works if he would give a schedule of the brickworks in this country, showing the extent to which mechanisation of clay-getting and clay-haulage increases as the output of bricks increases; whether increased mechanisation in the normal small brickworks increased output without increasing average costs of production; and what action he had taken, or proposed taking, to increase the supply of excavators and other mechanical aids, and encourage the small firms in the brick industry to use them.

MR. KEY said he was sending his hon. friend a schedule. As a general rule increased mechanisation in smaller brickworks tended to increase output and to reduce costs of production. Between January, 1946, and March, 1947, 45 Government surplus and new excavators of 1¼ yd. capacity or over had been allocated by his Department to the brick industry. It was hoped to allocate approximately 30 new machines during 1947 and 1948 which had been purchased in the United States, and in addition, negotiations were proceeding for the purchase from France of new machines suitable for small yards. The technical staff of his Department in conjunction with the Building research Station and British Refractories Research Association were encouraging the use of mechanical aids in small brickworks.

Maycrete Houses.

MR. GAMMANS asked the Minister of Works if he was aware that Messrs. Maycrete Sales, Ltd., had never been informed why their prefabricated houses were not suitable for erection in this country, although a thousand of them had been exported to Holland, and if he would state in what respect they were not suitable.

MR. KEY said that the firm received a copy of the Building Research Station Report of July 22, 1946, on the Maycrete system of construction which indicated that the system was likely to be satisfactory in principle for permanent housing if the external surface were covered with a durable veneer, but that there was insufficient evidence to say whether the system would be satisfactory without the veneer.

Slate Stocks.

MR. PRICE-WHITE asked the Minister of Works what was now the position of general slate stocks in this country, having regard to the fact that he had been able to cease the importation of Portuguese roofing slates; and if he anticipated providing a continuation or improvement of existing stocks so that there would be no further necessity for the importation of foreign slates in competition with slates quarried in this country.

MR. KEY said that the general stock position of roofing slates was poor, and at the end of February amounted to one month's production, 28,700 squares. They were not now importing Portuguese roofing slates, but they might have to resume importation owing to the pressing need for slates for repair work. At the same time, efforts were being made to improve the production rate of British slates.

A Questionnaire.

MR. WALKER-SMITH asked the Minister of Works, whether he was satisfied that the value of the information obtained from the questionnaires on operating costs of building material distributors sent to all builders' merchants by the Independent Committee on Distribution of Building Materials, the appointment of which was announced by him on June 24 last, justified the expense, time and labour necessarily involved in compiling the required information.

MR. KEY said that the committee attached considerable importance to the information which they hoped to obtain from this return for the purpose of their inquiry, and he saw no reason to intervene.

The Jewel Tower.

MR. SKEFFINGTON asked the Minister of Town and Country Planning whether he was aware that there was a proposal to build an office block on the sites of the houses which lay between Old Palace Yard and the wall leading up to the Jewel Tower; and whether, as this action would spoil the view of Westminster Abbey from that side, he would forbid the proposition.

MR. F. MARSHALL said he assumed that the question referred to a site in Abingdon-street, upon which it was proposed to erect offices for the use of members and officials of the two Houses of Parliament to supplement the inadequate accommodation within the precincts of the Palace of Westminster. He was aware of the proposal and was satisfied that the erection of a suitably designed building on this site for the purpose intended would be in the public interest.

INSTITUTION OF STRUCTURAL ENGINEERS

ANNUAL DINNER

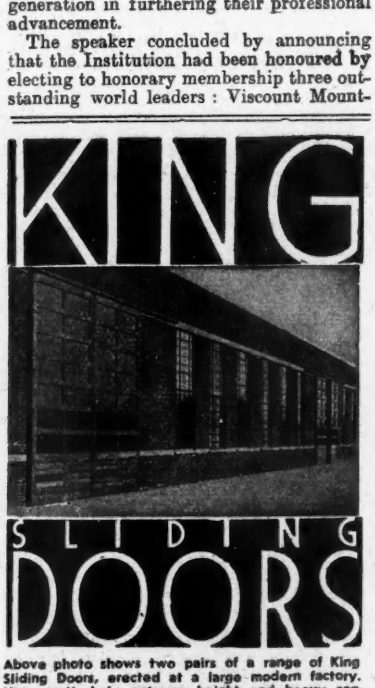
THE part that structural engineers can play in the economic recovery of this country was stressed by VISCOUNT BENNETT, P.C., LL.D., K.C., at the annual dinner of the Institution of Structural Engineers held on Thursday, May 8, at Grosvenor House, London. PROFESSOR H. J. COLLINS, M.Sc., M.I.C.E., President of the Institution, was in the chair.

VISCOUNT BENNETT, who was proposing the toast of "The Institution," referred to the profession as one whose membership was composed of men and women who were essentially realists and said: "To-day this country is faced with greater problems than ever before in its history. We have survived many things in the past, and it is with men such as you that the nature of our survival may be determined."

PROFESSOR COLLINS, responding, referred to the work of the Institution during the year, and said that its members had produced great advances in scientific engineering and the uses of materials; hundreds of members had offered their time to help other people without any thought of reward. The speaker added that one of the biggest problems facing the world to-day was reconstruction, and the major share of that work fell on structural engineers. The future of this country depended on the young people, and there were indications that the fullest encouragement was being given to them. The present-day development of technical education was evidence that young people were being offered scope to study and practise. It rested with members of the Institution to do all they could to give assistance to the younger generation in furthering their professional advancement.

The speaker concluded by announcing that the Institution had been honoured by electing to honorary membership three outstanding world leaders: Viscount Montbatten, Field-Marshal Smuts, and the Rt. Hon. Winston Churchill.

The toast of "The Guests" was proposed by MR. W. K. WALLACE, C.B.E., M.I.C.E., past-president of the Institution, and the Rt. Hon. the EARL OF ATHLONE, K.G., P.C., Chancellor of London University, responding, referred to Lord Bennett's remarks concerning the activities of British engineers all over the world, and expressed the hope that that state of affairs would long continue.



Above photo shows two pairs of a range of King Sliding Doors, erected at a large modern factory. Note particularly extreme height and heavy construction. All over the country leading firms have installed King Sliding Doors, and found them to give long and satisfactory service.

GEO. W. KING LTD.
HITCHIN HERTS

INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

FLAKING DISTEMPER

Question

T. P. writes: My house is built of 9-in. solid walls and is partly covered externally with cement rendering and partly faced brickwork. It was built in 1938 and is very dry and has a first-class dampcourse of slates in cement. I am now experiencing, seven years after taking the house, a peculiar phenomenon. The walls internally are distempered. For two years the distemper was all right. I then had the stairs and hall re-distempered. For three months it was all right, then the distemper seemed to flake, rising away from the wall eventually and turning into a kind of woolly fungus, which brushed off, leaving the bare plaster exposed. I thought at first that it was dampness, but it seemed strange that two years should elapse before showing itself. I again had it distempered and again it flaked, but this time in far greater measure. I have now left it bare, but nothing has happened. The wall seems quite dry. The outside of this wall was rendered. This week, in my dining-room, which is faced brickwork outside, I noticed the same thing is happening. It has not shown in this room before. The same thing is also happening in the kitchen, which is rendered outside and painted inside, finished with oil paint. From inquiries I have made from my neighbours I find that they are experiencing similar trouble. In some cases the houses are rendered, in others they are faced brickwork. It would seem that the trouble occurs only after a wall is repainted. My nearest neighbour recently had a whole room distempered, and one week after the external rendering flaked, turned woolly, and fell off.

The distemper was a washable oil-bound distemper; it was completely removed prior to repainting. The walls were finished in ordinary lime plaster.

For your further information I have discovered that the same effect has taken place in the garage, which has 4½-in. walls and no distemper, namely, a white fuzzy substance has shown itself. I am inclined to the opinion, after seeing this, that the fault lies in the bricks, being a salty efflorescence which is now showing itself, and which will probably cease once the salt has all appeared.

I should be glad of your opinion on this matter, with any recommendations you may care to make to obviate the trouble.

Answer.

G. W. H. and W. L. write: From the description, we should suspect that the bricks are highly charged with salt, and that efflorescence is developing to a serious extent. Its formation under distemper would certainly cause flaking, especially that of an oil-bound distemper, which has certain film-forming characteristics. Ordinary size distemper will not arrest the salt to the same extent, and may not

flake, but the efflorescence would no doubt collect on its surface. There is nothing much to be done except to brush the collection away periodically until it disappears. The flaking takes time to show itself because some of the salt is escaping through the surface and some building up underneath it. This "build-up" may be very gradual in some circumstances and will depend to some extent on weather conditions. It might well be, for instance, that systems that are actually unsound have remained in equilibrium for a considerable time, and then exhibited evidence of entire failure during the last few months of rigorous winter conditions.

If you wash the old distemper off, the water would be likely to extract more salt from the bricks and start the whole trouble over again. We should advocate removing the distemper by dry methods as far as possible, say, by hard rubbing down, and recoat with a size-bound distemper for a trial period, so as to ascertain whether the salt has spent itself. We do not think the woolly material substance is actually fungus; but, if so, wash it over with fungicide solution; there are several proprietary types on the market that would destroy the spores.

We think that the brickwork can be treated with an outside transparent waterproofer; this would stop the action of the rain, which sets the salts in motion, and gives the continued woolly surface inside; in other words, get the outside right and the inside will right itself, but let the salt disappear, if possible, by fair means first.

CONVERSION OF HOUSES TO FLATS

THE latest of the series of books published by the Ascot Gas Water Heaters, Ltd., "Houses into Flats," is a bold and imaginative answer to the problems of conversion facing many architects and building owners to-day.

Apart from illustrations of conversion schemes actually planned and carried out by leading architects, the publication carries a number of informative articles pertaining to the general subject of conversion. Building regulations affecting conversions are discussed by Charles Woodward, A.R.I.B.A., and costs and estimated returns are dealt with by F. H. Russell, F.I.A.A.S. D. M. J. Davidson, A.R.T.C., writes on sound insulation, an important factor in such schemes, while heat services and plumbing are dealt with by Leslie Hardern and W. J. Woolgar, M.R.San.I., respectively.

Mr. F. R. Yerbury, who was responsible for the organisation and compilation of the 200-page volume, points out in an introductory note that the conversion of large houses into flats will be accepted as a useful contribution to housing difficulties for some time to come. The Earl of Limerick, chairman of the Ascot Company, who contributes a foreword, stresses the importance of conversion in view of the fact that new construction alone cannot meet present-day needs.

The book was formally introduced at a reception at the Dorchester Hotel, London, on Friday, May 9, when Sir Lancelot Keay, K.B.E., P.R.I.B.A., offered his congratulations upon the selection of a subject not only of interest to members of the architectural profession, but also to those who own properties which were of great value in their heyday but now were only a liability. He trusted that as a result of the guidance given by the architects whose work was illustrated in the volume many a fine Georgian or Regency terrace would be preserved.

A BUILDERS' HOIST (See "Trade News")

TRADE NEWS

New London Office.

The head executive office of the Northern Aluminium Co., Ltd., was transferred from Banbury to Wellington House, Lancaster-place, Strand, W.C.2, on Monday, May 12. The London sales office also moved to this address, on the same date, from 11, Bruton-street, W.1. The new telephone number is Temple Bar 4433. Telegraphic address, Noraluco, Rand, London.

New Building Plant.

A builders' hoist, primarily designed to offset the acute shortage of bricklayers' labourers, is announced by Messrs. Mechanical (Agricultural and General) Equipment, Ltd., Hellidon, near Daventry, Northampton. Known as the Thwaites Hoist, this piece of equipment enables two operators to elevate bricks, tiles, lintels, mortar, etc., at high speed. It is claimed that when used in conjunction with a patented brick barrow, it is possible to collect bricks, tiles, etc., from within about 30 ft. from the base of the hoist, elevate them 18 ft. and place anywhere on a normal two-storey semi-detached dwelling at the rate of 800 per hour.

The hoist consists of a small portable windlass, complete with its 1 h.p. Villiers air-cooled petrol engine and expanding shoe-type clutch, hinged to the lower portion of the tubular telescopic guides which form the main frame of the apparatus. The whole unit is electrically welded and is fitted with a 45-ft. steel wire rope, a light detachable steel fabricated brick cage and ball-bearing, pneumatic-tyred road wheels. It is adjustable from 9 ft. in 6-in. stages to 18 ft. and has a lifting capacity of 300 lb.

Large-Scale Cooking Equipment.

A gas-heated, multi-compartment confector pastry oven, suitable for installation in small bake-houses, stores, hotels, restaurants, hospitals, and schools, is announced by Radiation, Ltd., 7, Stratford-place, London, W.1. The oven operates by the circulation of hot air within each compartment, and combines a specially balanced flue system with a method of gas control which ensures accurate and convenient manipulation.

NEWS ITEMS

Task Completed.

We are informed that the Roofing Felt Industry's Executive Committee, which has acted for the Ministry of Works since December, 1940, will cease to function as from May 31, having completed the work embodied in its terms of reference.

An Annual Report.

The June-July issue of the Housing and Planning New Bulletin contains the 47th annual report of the National Housing and Town Planning Council. The annual meeting of the Council will be held at 2.30 p.m. on Thursday, May 22, at the Connaught Rooms, Great Queen-street, London, W.C.2.

The Late Mr. Thomas Maiden.

We regret to report the death of Mr. Thomas Maiden, a prominent member of the National Federation of Demolition Contractors. Mr. Maiden was chairman of the North West Regional Organisation and had been a member of the council since the inception of the Federation.

Final Report of Housing Congress.

The final report of the 18th Congress of the International Federation for Housing and Town Planning held at Hastings last year has just been published. It gives full details of the subjects discussed at the Congress, including housing economics and policy, decentralisation, housing technique and the implementation of plans.

MODERN ROAD CONSTRUCTION

THE USE OF CONCRETE

Mr. W. P. Andrews, M.C., A.M.I.C.E., was the author of a paper on "Modern Road Construction in Concrete" read before a meeting of the Society of Chemical Industry, Roads and Building Material Group, at Gas Industries House, Grosvenor-place, W.1, on Thursday, April 17.

After discussing the importance of the careful preparation of the foundations and sub-bases of roads, the speaker, in connection with reinforcement, said: "There is no uniformity of practice. . . . Research into reinforcement is continuing in this country, but I cannot see any uniformity of opinion or finality in design for a long time ahead. In the meantime it must be left to individual engineers to decide whether or not to use reinforcement in view of the nature of the foundation and the volume of traffic to be carried."

We take the following extracts from the speaker's subsequent remarks: On the subject of spacing of expansion joints there have been marked developments since the war. Before the war it had become an almost standard design to have expansion joints at intervals of 25 ft. to 40 ft., the spacing depending on the thickness of the slab and on the incidence of reinforcement. It had been noticed that in roads in which there were no expansion joints cracks developed at intervals of from 10 ft. to 20 ft. This led to the introduction of crack control joints, also called dummy joints or contraction joints, the intention being to determine where cracking should take place and to have a straight-line crack instead of an irregular one. The provision of these dummy joints at intervals of 10 ft. to 20 ft. also counteracted warping stresses and made for smoother running surfaces. It permitted the wider spacing of expansion joints, but how far this policy can be adopted is still a matter of research. It must be kept in mind that if a road is laid during hot summer weather the subsequent tendency will be for the slab to contract rather than to expand with temperature changes. On the other hand, if the construction is done in cold weather there is a risk of subsequent expansion during hot spells, and if provision is not made for this bursts may occur.

Concrete.

The introduction of machinery for compacting concrete has permitted the use of a much drier mix, with consequent increase of strength. We can get to-day a figure of about 5,000 lb. per sq. in., and even up to 7,000 lb., as compared with a pre-war strength of 2,000 to 2,500 lb. obtained by manually compacted concrete.

We are also steadily getting away from the old type of specification of a 1 : 2 : 4 mix. To-day the tendency is to specify the proportion by weight of cement to combined aggregate, leaving the grading and the proportions of fine and coarse aggregate to be decided on the job and adjusted to suit the type and grading of aggregate being used. Some authorities specify the weight of cement per cu. yd. of concrete. Some specify the concrete be such as to have a minimum crushing strength in seven or 28 days.

Whatever manner is adopted for specifying the mix, weight batching is now obligatory on all important road work. This eliminates the snag of bulking of sand, though it introduces the need for making allowance for the moisture contained in the aggregates.

Spreading Concrete.

A mechanical distributor is an essential for the efficient and economical spreading of dry concrete. The different types of distributors are: (1) Hopper distributor travelling on a girder; (2) screw-type spreader; (3) blade-type spreader; (4) Stothert and Pitt spreader.

All these can be adjusted to spread the concrete to the correct level, slightly higher than the forms, to allow for consolidation and to spread it evenly, so that it is of fairly uniform density before consolidation starts.

The stages of development of tamping are: (a) the ordinary hand-tamping beam; (b) the same beam fitted with vibrating units; (c) a compacting unit, either vibrating or rapid tamping, mounted on wheels; (d) a self-propelled unit which screeds, consolidates and finishes the surface.

The outstanding merit of mechanical compaction is that it permits the use of a concrete with a low water/cement ratio, as it is now a universally accepted fact that the strength of the concrete depends on this. Before the introduction of vibration it was not possible to compact a very dry mix, and attempts to use a dry mix without adequate compaction had never given satisfactory results.

The fact must be admitted that in this country we have been a long way behind in the use of mechanical compactors. The first machine used on main roads was a German machine, which compacted the concrete by a series of hammer blows followed by a beam tamper, which in turn was followed by a vibrating beam to give the desired surface finish. This was a somewhat cumbersome machine, and both here and in Germany it gave place to the vibrating tamper, which consolidates and finishes in one operation. Most Continental countries manufacture their own vibrating plant, and in every country vibration has displaced hand tamping.

A Good Workable Mix.

The success of a vibrated concrete road—*i.e.*, its smooth-running qualities—depends on having a good workable mix of concrete, on having the side forms, and/or rails, on which the machinery travels laid absolutely true and so firmly bedded that there will be no yield or movement whatever during the traverse of the machine, and in having absolute truth of level through the joints. It will be obvious that any difference in level in the forms will be permanently reproduced in the road surface. The Germans laid a longitudinal concrete sleeper to support the rails, and so careful were they that they even cut the rail joints at an angle of 45 degrees to eliminate the transmission of jar when the finishing machine was passing over the joint.

It is advisable to supplement the large vibrator by smaller pan tampers and internal vibrators. The pan tamper is used at irregular sections—*e.g.*, road junctions, where the normal tampers cannot function efficiently. The internal or poker vibrator is used at joints and edges of the slab to ensure complete compaction, and especially at tongued and grooved joints, to get the concrete well packed into the underside of the tongue.

WORKING RULE AGREEMENT

The 1947 Edition of the London Working Rule Agreement for the Building Industry, published by the London Regional Joint Committee, is now on sale. It contains all revisions made up to date in the Working Rule Agreement and cancels all previous issues. Official copies (3d. each, plus postage) are available only from the Joint Secretaries.

Employers' Secretary:
R. E. STENNING, B.A. (Cantab),
London Master Builders' Association,
47, Bedford Square, W.C.1

Operatives' Secretary:
E. L. JONES,
National Federation of Building Trades Operatives (L.R.C.),
8, Breams Buildings, Chancery Lane, E.C.4.

FOR THE INFORMATION OF NEW BUILDERS.

The London Working Rule Agreement is the official book of Rules governing the conduct of the building industry in the London area. Under Defence Regulation 56 AB all builders in the area have to conform to its conditions. It is agreed annually by the London Regional Joint Committee of the National Joint Council for the Building Industry and published with their authority.

Official copies are available only through the secretaries of the London Master Builders' Association and the National Federation of Building Trades Operatives (L.R.C.) at the above addresses.

THE SCOTTISH BUILDER

NEW BUILDINGS

Clyde, Glasgow.—Clyde Navigation Trust to extend double-storey shed at 36-40, Lancefield Quay, at £74,000.

Glasgow.—Dean of Guild Court passed plans for extensions at University of Glasgow, at £12,000; Y.W.C.A. to erect three hostels.

Glasgow.—School buildings proposed at Copeland-rd., for which the architect is John MacNab, 129, Bath-st., Glasgow. Additions and alterations proposed for Glen Cars, Ltd., at Paisley-rd. West, for which the architects are Wilson, Honeyman and Jack, 92, Bath-st., Glasgow. Workshops and stores for Turner and Co. at 44 to 48, Brown-st., for which the architects are J. T. Thomson and McCrae, 212, Bath-st., Glasgow. Alterations and additions proposed for Avery, Ltd., at 242/4, St. Vincent-st., for which the architect is C. Sinclair, 121, West Regent-st., Glasgow.

Paisley.—Dean of Guild Court approved plans submitted by United Thread Mills, Ltd., for new buildings at £105,000.

FUTURE CONSTRUCTION

CONTRACTS OPEN

For some contracts still open but not included in this list, see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

MAY 22.

Honiton R.D.C.—4 houses at Branscombe. W. Labdon, C., Council Offices, Manor House.

MAY 24.

†**Essex C.C.**—Conversion of Old Police Station, Witham, into Combined Treatment and Health Centre at £1,000. H. Conolly (F.), County A.

†**Herefordshire C.C.**—Alterations to portion of front block at Institution Buildings, County Council Hospital, Hereford, to form Public Health Laboratories. County A. Dep. £2 2s.

MAY 27.

†**Norfolk E.C.**—Erection of prefabricated hut at Costessey County Primary School. F. G. Limmer (F.), Ed. Architect. Dep. £2 2s. Tenders by June 10.

MAY 28.

***Norwich T.C.**—110 dwellings at West Earlham estate. City A. Dep. £1.

†**Old Fletton U.D.C.**—38 houses at Chapel-st. extension, Stanground. A. W. and H. J. Wilson (F.), Cumbergate, Peterborough. Dep. £2 2s.

†***West Sussex C.C.**—Erection of 3 class junior and infants' school at East Wittering, nr. Chichester. Job No. 186. F. R. Steele (F.), County A.

MAY 29.

†***Croydon C.B.**—Kitchen and dining hall at Selhurst Grammar School for Girls, The Crescent. Chief Ed. Officer, Katharine-st. Dep. £1. Tenders by June 20.

MAY 30.

Lunesdale R.D.C.—6 pairs of houses at 3 sites. E. A. Smalley, Architect, Council Offices, Hornby. Dep. £1 1s.

MAY 31.

†***Beaminster R.D.C.**—6 houses at Old Fair site. R. Leigh, C. Dep. £2 2s.

†**Castleford U.D.C.**—16 flats for aged persons at Joffre-ave., Glass Houghton. W. E. S. Barnes, C. Dep. £2 2s.

North Radstock U.D.C.—36 houses with site works for 62 houses at Westfield. W. J. Landray, C., Council Offices, Midsomer Norton. Dep. £2 2s.

†***Surrey C.C.**—15 police houses with garages at various sites. County A. Dep. £2 2s.

Swinton and Pendlebury T.C.—Five blocks of flatted houses at Temple-dr. J. C. Prestwich and Sons (F. and A.), Bradshawgate-chbrs., Leigh, Lancs. Dep. £2 2s.

JUNE 2.

Barnstaple T.C.—40 houses at Pilton estate. W. G. Douch, B.S. Dep. £2 2s.

Frinton and Walton U.D.C.—28 houses at various sites. H. D. Harrison, M.Inst.M.E., B.E. and S.

Rayleigh U.D.C.—16 houses at Church/Warwick-rds. site. G. Shenstone, C.B.E. (F.), 34, Bloomsbury-way, London, W.C.1. Dep. £3 3s., payable to U.D.C.

***Saffron Walden R.D.C.**—8 houses at 2 sites. C. Dep. £3 3s.

JUNE 4.

Bideford T.C.—16 houses and 4 shops at Barton estate, East-the-Water. B.S. Dep. £3 3s.

Stratford-on-Avon R.D.C.—9 houses at Park Piece, Kineton J. E. Bagnall and Son, York House, Gt. Charles-st., Birmingham, 3. Dep. £1 1s.

JUNE 5.

Andover R.D.C.—4 pairs of cottages at 2 sites. F. Henshaw, Westminster Bank-chbrs., Andover. Dep. £1 1s.

***Warminster U.D.C.**—16 houses with roads and sewers at Hillwood. Pictor, Snailum and Huggins (F. and A.), Abbey-chbrs., Bath. Dep. £2 2s.

JUNE 6.

Hemsworth R.D.C.—12 houses at Great Houghton. S. Price, E. and S. Dep. £2 2s.

Manchester Waterworks Committee.—(1) Pair of cottages at Stanah; (2) 2 pairs of cottages at Fisher-pl.; (3) 3 pairs of cottages at High Bridge-end. City A. Dep. £1 1s. each contract.

JUNE 11.

North Kesteven R.D.C.—20 houses at Station-rd., Branston. J. Chadwick, S., Council Offices, 31, Clasketgate, Lincoln. Dep. £2 2s.

Stretford T.C.—Additional lavatory accommodation at Town Hall. B.S. Dep. £2 2s.

JUNE 16.

***Aireborough U.D.C.**—Work in all trades for 98 houses at Yeadon Haw site. S. and E. Dep. £10 10s. for all trades or £2 2s. each trade.

***St. Albans T.C.**—16 bungalows for aged people and 16 houses at Cottonmill-la. in 4 sections. City E. and S., "The Grange," 16, St. Peter's-st. Dep. £1 1s. each section.

***Stourbridge T.C.**—28 Duplex houses, 50 3-bedroom houses and 20 bungalows at Norton estate. G. N. Maynard, A.M.I.C.E., F.S.I., B.E. and S. Dep. £3 3s.

JUNE 19.

***Kidsgrove U.D.C.**—16 Duplex houses at Woodshutts estate. E. and S. Dep. £5 5s.

JUNE 21.

***Eccles T.C.**—(a) 46 houses and 10 bungalows at Alder Park; (b) 16 houses at Gee-la.; (c) 28 houses at Peel Green-rd. B.E. and S. Dep. £2 2s.

JUNE 24.

Shoreditch B.C.—80 flats in 4 blocks at Felton-st. area. Boro' A. Dep. £10.

NO DATE.

†***Eastry R.D.C.**—114 brick-built houses and 50 Airey houses at various sites. H. M. Barker (L.), 16, King-st., Deal, Kent.

***Essex C.C.**—Erection of school, approx. cost £100,000. H. Conolly (F.), County A.

Malton U.D.C.—30 houses at Highfield-rd. estate. Guy D. Channon, Architect, Market-st., Malton. Dep. £2 2s.

MISCELLANEOUS

MAY 27.

Bilston T.C.—Demolition of shelters. B.E. Dep. £3 3s.

MAY 30.

Kingston-upon-Hull T.C. — Demolition of trench shelters and wardens' posts. B.S. Dep. £2 2s.

MAY 31.

Malvern U.D.C.—Demolition of approx. 200 shelters.

JUNE 2.

Acton T.C.—Demolition of trench shelters and emergency water structures. B.E.

***Shoreham-by-Sea U.D.C.**—Removal of defence works. C. Dep. £2 2s.

PAINTING, ELECTRIC LIGHTING, MATERIALS, ETC.

MAY 27.

†**Watford T.C.**—B.E.

MAY 28.

***Caine and Chippenham R.D.C.**—External redecoration of 142 houses at various sites. B. W. Stevens, Building S., Bewley House, Marshfield-rd., Chippenham.

MAY 31.

Lancs E.C.—External painting of 3 schools. Div. Ed. Officer, Ed. Offices, Clarendon-rd., Eccles.

JUNE 2.

Liverpool T.C.—External painting of 6 primary schools. City E. and S.

ROADS, SEWERAGE AND WATER WORKS

MAY 24.

Chorley T.C.—Roads and sewers at Thornhill estate. B.E. Dep. £2 2s.

†**Maidstone R.D.C.**—Preparation of Nettlestead site. E. and S. Dep. £2 2s.

MAY 26.

Belper R.D.C.—Provision and laying of iron pipes and valves and fittings in 3 parishes. Elliott and Brown, Stanley House, Pelham-rd., Nottingham. Dep. £3 3s. (by cheque).

Leatherhead U.D.C.—Asphalt surfacing of roads. C.

Lleyn R.D.C.—Sewerage and sewage disposal works at Chwilog. Richards and Dumbleton, Cornwall-bldgs., 45, Newhall-st., Birmingham, 3, and Greenways, Portmadoc. Dep. £5 5s.

Macclesfield T.C.—Roads and sewers at Sutton-la., Erds. J. H. Walters, E., 19, Moody-st., Congleton. Dep. £2 2s.

Sleaford U.D.C.—Construction of sewers and sewage pumping station. C., Council Offices. Dep. £5.

MAY 27.

Failsworth U.D.C.—Roads and sewers at Propps Hall site. E. and S. Dep. £2 2s.

Mid-Kent Water Company.—Excavating, laying and jointing of water mains. H. D. Edwards, Secretary, High-st., Snodland, Kent. Dep. £2 2s.

Seaton Valley U.D.C.—Surface dressing of roads. S.

MAY 28.

Ashton-under-Lyne T.C.—Roads and sewers at Crowhill. B.E. and S. Dep. £2 2s.

Aspull U.D.C.—Roads and sewers at Hilton Farm estate. E. and S. Dep. £2 2s.

Bacup T.C.—Tarspraying of roads. B.E.

Northampton R.D.C.—Roads and sewers at Duston and Wooton. E., 1, Cheyne-walk. Dep. £3 3s.

Ystradgynlais R.D.C.—Preparation of site No. 1 D, Gorof-rd. E. and S., Council Offices. Dep. £5 5s.

MAY 30.

Swaffham U.D.C.—Concrete road at Walton-rd. site. S. Dep. £2 2s.

MAY 31.

Abertillery U.D.C.—Surface dressing of roads. E. and S.

†**Bognor Regis U.D.C.** — Surface water drainage. D. Balfour and Sons, 131, Victoria-st., Westminster, S.W.1. Dep. £5.

Lymm U.D.C.—Roads and sewers at Elms Farm site. C. Dep. £2.

Malvern U.D.C.—Roads and sewers at Madresfield-rd. "B" scheme and "The Knapp" scheme. S. and Water E. Dep. £2 2s.

Marlow U.D.C.—Roads and sewers at Newtown-rd. estate. Contract No. 6. S. Dep. £2 2s.

†**West Dean R.D.C.**—Roads and sewers, etc., at Sunnybank, Coleford. H. F. Trew (F.), Burleigh House, Nettleton-rd., Gloucester. Dep. £2 2s.

JUNE 2.

Acton T.C.—Resurfacing roads. B.E.

Darlaston U.D.C.—Roads and sewers at Rough Hay site. E. and S.

Doncaster C.B.—Roads and footpaths at site No. 6a, Glebe estate. Estates S., 15, South Parade. Dep. £2 2s.

Ploughley R.D.C.—Provision and laying of approx. 1,445 yds. of 3-in. water mains and fittings. E. F. T. Davis, C.S.I., Sanitary S., Waverley House, Bicester. Dep. £1 1s.

Stretford T.C.—Reconstruction of roads. B.S. Dep. £2 2s.

JUNE 3.

Letchworth U.D.C.—Roads and sewers at Grange estate. E. and S. Dep. £2 2s.

JUNE 4.

Abergavenny T.C.—Site preparation works at Llwynu Farm site. B.E. Dep. £3 3s.

JUNE 6.

Kingsclere and Whitchurch R.D.C.—Construction of 500 yds. of 9 in. stoneware sewer, etc., at Kingsclere. Lemon and Blizard, Lansdowne House, Castle-la., Southampton. Dep. £3 3s.

Wolverhampton C.B.—Roads and sewers at Willenhall-rd. (North) site. B.E. Dep. £2 2s.

JUNE 9.

Hendon T.C.—Surface water sewer at Hillview-gdns. and King's-close. B.E. and S. Dep. £2 2s.

JUNE 10.

***Huntingdon R.D.C.**—Roads and sewers at Brampton. Parkinson and Doe (L. and A.), Montagu House, Huntingdon. Dep. £2 2s.

Reading C.B.—Site preparation of Emmer Green site. B.S. Dep. £2 2s.

JUNE 12.

Vaynor and Penderyn R.D.C.—Sewage disposal works at Vaynor housing scheme, Cefn Coed. C. Dep. £5.

JUNE 14.

Wednesbury T.C.—Roads and sewers at Dingley-rd. site. A. Booth (F.), B.S. Dep. £3 3s.

JUNE 30.

Belfast City and District Water Commissioners.—Construction of tunnel and intake works. D. McGarrigle, Secretary, Water Office, Belfast. Dep. £10.

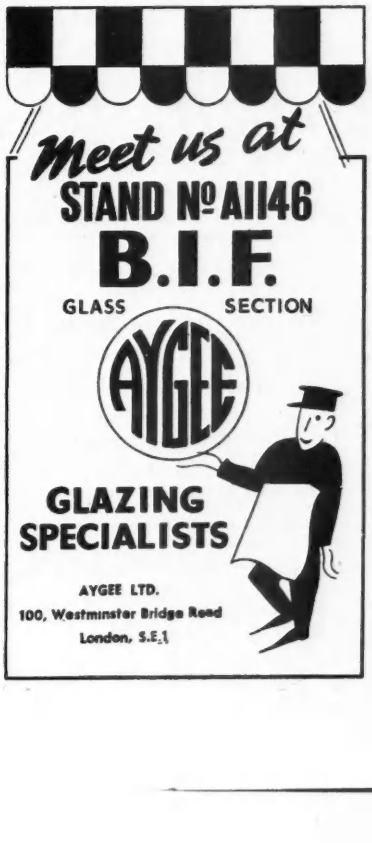
PRICES OF MATERIALS.

Metal Windows and Doors.

The Minister of Works has authorised the following increases in the sale prices of standard metal windows and doors:—

A 2½ per cent. increase in the "plussage" on standard list prices—*i.e.*, from 20 per cent. to 22½ per cent. A 2½ per cent. increase in the extra cost for rust proofing—*i.e.*, from 17½ per cent. to 20 per cent.

These increases operate as from May 1.



PUBLIC APPOINTMENTS

Full details of Public Appointments open will be found in the advertisement pages of this and previous issues.

GENERAL BUILDING WORK

(LONDON)

Becontree.—DAY NURSERY.—Ilford B.C. have acquired a site from the L.C.C. for the erection of a day nursery.

Brentford.—HOUSING.—B.C. propose to spend £36,000 on housing at the Syon-ln. extension No. 3 and £140,000 at the Sutton-ln., Hounslow, sites.

Brentford.—HOUSING.—Flats and houses for 170 families are to be erected on the site of St. Thomas's Hospital sports ground, by the Brentford and Chiswick Council.

Camberwell.—HOUSING.—L.C.C. propose to acquire a site of .67 of an acre in East Surrey-grove for housing purposes.

Camberwell.—HOUSING.—In connection with its housing programme for 1947 the B.C. propose to go out to tender this year for the following sites: 19-37 and 39-41, Hawkslade-rd., and 20-26, Athenlay-rd. (20 dwellings)—Apprentice Master Scheme. 1-17, Ablett-st., and 113-119, Barkworth-rd. (24 dwellings); 1-11, Rainbow-st., and 12-17 (cons.), Bonsor-st. (12 dwellings); 1-21, Manaton-rd., and 68-83, Philip-rd. (16 dwellings)—Apprentice Master Scheme or tenders. 1-13, Adys-rd. (6 dwellings)—tenders. 2-24, Lytcott-grove (12 dwellings); 18-34, Playfield-cres., 1-19, Lytcott-grove, 1 and 2, Lytcott-gdns., 102-136, Melbourne-grove (44 dwellings)—tenders. Denmark Hill Housing Estate (a) 188 two-storey houses and flats, (b) 4 blocks of flats of 36 dwellings each on the Denmark-hill frontage—tenders. Cost-of-works houses, 36-42, Athenlay-rd. (4 dwellings)—Apprentice Master Scheme. Cost-of-works

houses, 10-16 and 62-72, Casino-ave. (10 dwellings)—plans not yet completed. The Housing Committee recommend that applications be invited from builders desirous of tendering for all or some of the dwellings to be under construction at the end of 1947.

Chelsea.—ACCOMMODATION FOR AGED PERSONS.—B.C. are to convert certain properties in Danvers-st. into housing accommodation for aged persons.

Chiswick.—BOATHOUSE.—L.C.C. and Board of Education are considering the building of a large boathouse with gymnasium on a site close to Barnes Bridge. A similar building is contemplated for a site not yet decided upon on the banks of the River Lea.

Deptford.—SCHOOL.—L.C.C. propose to build a school on a site of .9 acre in Finland-rd. and Revelon-rd.

Downham.—CHURCH BUILDING.—The Rochester and Southwark Diocesan Church Trust propose to erect a Church building on a site to be purchased from the L.C.C.

Dulwich.—NURSES' HOME.—L.C.C. propose to reinstate the nurses' home at Dulwich Hospital, at an estimated cost of £11,710.

Finsbury.—HOUSING.—L.C.C. propose to purchase a 3.3 acres site, bounded by Percival-st., Malta-st., Compton-st. and Agdon-st., as an extension of the adjoining Percival-st. site.

Greenwich.—HOUSING.—The Beaver Housing Society, Ltd., propose to develop a site in Weldington-gdns., Crooms-hill. B.C. have asked L.C.C. for sanction to borrow £31,360 for the purpose of a loan to the Society for the project. The Society recommend for acceptance the tender at £24,599 of Morston Contractors, Ltd., 124, Victoria-st., S.W.1.

Hackney.—FLATS.—Housing Committee have approved a tentative scheme for the erection of 93 flats on the Stoneham-rd. site. Messrs. Val Myer, Hart and Willis are the architects.

Hackney.—FLATS.—Housing Committee of the L.C.C. have approved a scheme submitted by the appointed architects, Messrs. Hudson and Hammond, for the erection of 60 flats on the Broadway area. Communal laundry, cycle and perambulator sheds will form part of the scheme.

Hammersmith.—LICENSED PREMISES.—Messrs. Mann, Crossman & Paulin propose to erect licensed premises on a site at Caroline Estate.

Kensington.—FLATS.—18 flats to be erected in Kelfield-gdns. will cost approximately £30,000. Plans prepared by the B.E. & S.

Lambeth.—FLATS.—Housing Committee of the L.C.C. have approved a tentative scheme prepared by Messrs. Hugh Minty and Partners, architects, for the erection of 130 flats on the York-hill site. Estimated cost is £215,500.

Peckham Rye.—HOUSING.—Mr. Lionel H. Fewster, L.R.I.B.A., of Messrs. Fewster and Partners, architects, has been appointed by the Camberwell Housing Committee to prepare plans for the development of a permanent housing site between Fenwick-rd. and Kinsale-rd.

Shoreditch.—REINSTATEMENT OF FLATS.—L.C.C. propose to reinstate and remodel Horner and Stringer Houses, Whitmore Estate, at an estimated cost of £123,420.

South Bank.—DEVELOPMENT.—Dr. Charles Holden, Hon. Litt.D., F.R.I.B.A., M.T.P.I., has been appointed by the L.C.C. as architectural and planning consultant for the development of the South Bank of the River Thames, between Westminster and Waterloo bridges.

Stepney.—FLATS.—L.C.C. Housing Committee have approved a tentative scheme for the development of the Ben Jonson-rd. site as part of the Ocean Estate. It is proposed to erect 113 flats at a total estimated cost of £216,000.

Stoke Newington.—HOME FOR AGED.—Scheme has been approved by Social Welfare Committee of the L.C.C. for the erection of a home for 94 aged persons on a site at Woodberry Down. Estimated cost, £76,100.

Sydenham.—FLATS.—Camberwell Housing Committee have approved a suggested layout submitted by the Council's architect for the erection of 117 flats on the Sydenham Hill site.

Wandsworth.—HOUSES.—B.C. are to erect 48 houses on 8 small sites, at an estimated cost of £64,219.

Woolwich.—HOME FOR AGED.—Social Welfare Committee of the L.C.C. have approved a scheme for a home for 100 aged persons on a site at 82, Plumstead Common-rd., at an estimated cost of £41,065.

(PROVINCIAL)

Belper.—Nottingham Diocesan Schools Association propose R.C. school. Sylcote (Belper), Ltd., propose factory at The Meadows.

Billinge.—U.D.C. appointed J. M. Wilson & Son, 2, Naylor-st., St. Helens, architects for layout and house plans for development of Claremont estate.

Birkenhead.—E.C. propose repairs and extensions at Laird-st. school. Plans by H. J. Rowse (F), Martins Bank-bldgs., Water-st., Liverpool, 2.

Blackpool.—T.C. approved: Factory and stores at Clifford-rd., for W. H. Smith; warehouse at Portland-rd., for Co-operative Wholesale Society, Ltd., 1, Balloon-st., Manchester, 4.

Bolton.—E.C. propose completion of Technical College, Manchester-rd. Plans by Lanchester & Lodge (FF), 19, Bedford-sq., London, W.C.1; Secondary Modern school at Wigan-rd., and east of Beaumont-rd.; County Primary Junior and Infants' school at Withins-la. and Bury-rd.

Bootle.—Campbell & Isherwood, Ltd., Hawthorne-rd., propose works extensions for new foundry. T.C. propose ladies' plunge bath at Public Baths, Balliol-rd., at £19,800

Brighton.—Electricity Commissioners approved plans for extensions at Southwick Power Station, at estimated cost of £12,000,000, for Corporation.

Cheshire.—C.C. propose technical colleges at Macclesfield, Northwich, Crewe, and one for Sale and Altrincham districts.

Chester.—T.C. approved: Rebuilding warehouse at Seller-st., for R. C. Crowder; workshops at Delamere-st., Farmore Property Trust, Ltd.

Coventry.—T.C. propose development of Courthouse Green estate for 254 houses, bungalows and flats. Plans by D. E. E. Gibson (A.), City A.

Darley Dale.—British Legion branch propose erection of headquarters.

Durham.—Amended plans approved for paint works at Belden, for Ward's Paint Co., Sunderland. Architect is Howard Hill, 10, Winchester-st., South Shields.

Eccles.—T.C. approved: Works canteen at Patricroft, for Eccles Spinning & Manufacturing Co., Ltd.; extensions, for Stronach & Co.

Guildford.—Surrey E.C. propose to erect Primary and Secondary school adjoining Park Barn Farm estate.

Hoylake.—Cheshire C.C. propose child welfare centre at Meols-rd.

Hull.—Humber Oil Co., Ltd., Burton-st., propose factory at Marfleet, at £50,000. Plans by R. G. Clark (F.), Bedford-chrs., Scale-la.

Huyton.—Lancs. E.C. propose secondary modern school, junior school and infants' school at Stockbridge-la. site. Plans by G. Noel Hill (F.), County A.

Ince-in-Makerfield.—Co-operative Wholesale Society, Ltd., 1, Balloon-st., Manchester, 4, propose glass factory at rear of Webster-st., Platt Bridge.

Jarrow.—G. C. Young, Grange-rd., West Jarrow, is architect for rebuilding of warehouse premises for W. Todd & Sons, Wear-st., Jarrow.

Keighley.—R.C. Authorities of St. Anne's parish propose schools, at £90,000.

Kidderminster.—Worcs. C.C. propose County Institution at Lea Castle.

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Leeds.—City Transport Committee approved 'bus garage near city centre.

Liverpool.—T.C. propose Secondary Modern school at Speke estate. R. A. Brand & Co., Ltd., propose factory at Woodend-ave., Speke. William Ross, Ltd., Hawthorne-rd., Bootle, propose storage buildings.

Long Eaton.—Derbys. E.C. propose County Primary school for juniors and infants at Longmoor.

Luton.—T.C. negotiating for 122 "Trusteel" houses for erection at Farley Hill estate.

Macclesfield.—T.C. propose 101 additional houses at Ivy-rd. estate. Plans by E. A. Heppenstall (A.), Boro' A., Pear Tree House, Jordangate. R. A. Riseley, Castle-st.-chbrs., is architect for War Memorial at Rainow, for Committee.

Manchester.—Gallagher, Ltd., tobacco manufacturers, propose to erect factory at Leestone-rd., Northenden.

Manchester.—T.C. propose: Additional hangars, equipment and alterations to existing buildings at Barton Air Port, at £27,850; 17 additional shops at Hollyhedge-rd., Wythenshawe; Child Welfare Centre at Wilmslow-rd., Didsbury, at £10,060. T.C. approved: Additions at cap factory, Briddon-st. and Julia-st., Strangeways, for J. Lang & Co. (Manchester Clothiers), Ltd.; clothing factory, warehouse and offices at Cheetham Hill-rd., for Hetty Morris; furniture stores at Lower Byrom-st., for Wainwright & Sons, 18, Brazennose-st., Albert-sq.; rebuilding works at Hyde-rd., Gorton, for Lewis & Co.

Oldham.—T.C. approved: Additions at Ashley Mills, Ashley-st., for B. Lees & Co., Ltd.; extensions to works at Crossbank-st., for Dronsfield Bros., Ltd.; additions at Lyon Works, Tattersall-st., for S. Dodd & Sons, Ltd.; additions at Hartford Mills East, for Platt Bros. & Co., Ltd.

Pwllheli.—T.C. propose conversion of South Beach Hotel into flats.

Rochdale.—J. W. Lees & Co. (Brewers), Ltd., Greengate Brewery, Middleton Junction, propose hotel at Queensway. Plans by Butterworth & Duncan, architects, 2, Baillie-st.

Salford.—E.C. propose Modern Secondary school at Hope Hall, Pendleton.

Scunthorpe.—T.C. propose development of 134 acres of land for housing at junction of Burringham-rd. and Messingham-rd.

Shifnal.—R.D.C. propose 109 houses at 8 sites.

South Shields.—E.C. to erect two infants' schools. Plans by Howard Hill, 10, Winchester-st., South Shields.

Stockport.—E.C. approved school at Bridge Hall estate, at £82,515.

Stretford.—E.C. propose school canteen at Stretford-rd., Old Trafford. Howard & Benson (AA.), 88, Mosley-st., Manchester, 2, are architects for houses and flats at Sandy-la. and Barton-rd. sites for T.C. Lancs. E.C. propose Health Centres at Old Trafford, Trafford Park and Stretford Borough areas. T.C. approved storage building at Trafford Wharf-rd., for British Oil & Cake Co., Ltd.

Sunderland.—United Bus Co., Ltd., Darlington, to erect 'bus station. Plans by H. N Tough, Chief E., United Bus Co., Ltd.

Wakefield.—Wheatley & Houldsworth (F.), Savile House, Savile-st., Hull, are architects for works at Grantley-st., for Translucent Glass Co., Ltd.

Wallasey.—T.C. approved layout plans for development of Castleway estate for 239 houses. E.C. propose dining-room and kitchen at St. Joseph's R.C. schools.

Wallsend.—Extensive alterations and additions proposed at Stephenson-st., for Cookson Lead and Antimony Co., Ltd. Architect is E. M. Lawson, Barras-bldgs., Barras Bridge, Newcastle-on-Tyne.

Wellington.—U.D.C. approved plans for civic centre at Tan Bank, at £120,000.

West Hartlepool.—Hartlepools United F.C. propose steel and concrete grandstand, with dressing-rooms and office accommodation, at £15,000.

Wigan.—E.C. propose Secondary Modern school for girls, and Secondary Modern school for boys.

Wythenshawe.—Associated British Cinemas, Ltd., London, W.1, propose super cinema on junction of Hollyhedge-rd. and Brownley-la.

York.—North Riding C.C. propose extensions at Hospital for Mentally Defective, Clifton, at £42,620.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government departments*.

Ampthill.—26 Airey rural type houses at Hillfoot End, Shillington, from precast units to be supplied by R.D.C. C. A. Lewis, E. & S. Quantities by F. C. Tollafield, Hitchin, Herts: *A. H. Burr, 28, Station-rd., Lower Stondon, nr. Hitchin, Herts.

Ampthill.—Houses for R.D.C. 12 Airey at Aspley Guise: *Smith Bros. & Bridges, Tempsford, Sandy, Beds; 32 traditional at Aspley Guise: *C. Hutton & Co., Ltd., 61, High-st., Woburn Sands, Bletchley.

Bath.—24 houses at Twerton estate, for City Council: *Howell Bros., £29,459.

Belper.—24 houses at Horsley Woodhouse, for R.D.C.: *Vic Hallam, Ltd., Maripool, Heanor, Notts, £28,077.

Bishop's Stortford.—72 houses for U.D.C.: ‡Unit Construction Co., Ltd., £94,689 (subject to M.H. approval).

Bootle.—Two dwellings at junction of Moss-la. and Johnston-av., for C.B. W. A. Harrison, M.Eng. (L'pool), B.S.: *T. Griffith & Son, Westminster-rd., Anfield, Liverpool 4.

Bournemouth.—New buildings at Linford Sanatorium, for T.C.: ‡William T. Nicholls (Southern), Ltd., £132,869.

Bridgwater.—Houses for R.D.C. Two at High-st. and two at Fore-st., Othery: *Manchip & Heysham, Bridgwater, £2,338 and £2,290; two at North Petherton: *Hawkins & Sellick, North Newton, £2,395.

Brighton.—48 flats at Hollingbury, for T.C.: *S. A. Gregory, Worthing, £52,320 (negotiated tender accepted subject to M.H.).

Chanctonbury.—Four houses at Blackstone, for R.D.C.: *T. L. Beamish, £5,186.

Cheltenham.—22 houses for T.C.: *A. C. Billings & Son, Ltd., 54, Winchcombe-st., Cheltenham (12), £14,682; *Collins & Godfrey, Ltd., 38, Grosvenor-st., Cheltenham (eight), £9,717; *E. L. Squire, 4, Hatherley Villas, Andover-rd., Cheltenham (two), £2,347.

Coleraine.—14 houses at Millburn site, for T.C.: *J. Magee, Coleraine, Co. Derry, £22,790.

Crickhowell (Brecon).—Works at War Memorial Hospital: (a) Erection of nurses' home and staff quarters; (b) outpatients' department and clinic. Geo. H. Davies (F.) & Partners, architects, 12, Cross-st., Abergavenny: *Greene Industries, 144a, Durham-rd., Newport, Mon.

Cromer.—Completion of Cromer Modern Secondary school, for Norfolk E.C.: *B. E. Gotts, Mundesley, £12,423.

Cromer.—Reconstruction of Cromer Pier, for Protection Commissioners. Ernest Latham, M.I.C.E., 72, Victoria-st., S.W.1: *Wigan Construction Co. (Nottingham), Ltd., Carrington-st., Nottingham (cost, plus percentage).

Crosby.—Houses for T.C. J. R. Fothergill, B.S.: *Gittins Bros., 32, Orchard Dale, Great Crosby (16); *Albert Bros., 52, Stafford-st. (14); *J. Barker, 48, Syren-st. (14); (all of Liverpool).

Devizes.—20 Airey rural houses with outbuildings, drainage, paths, etc., for T.C. J. D. Sheasby, B.S.: *L. Maslen & Sons, Ltd., Bridewell-st., Devizes, £26,990.

Felixstowe.—20 houses for U.D.C.: *Rogers Bros., Ltd. (10), £12,932; *P. C. Plant & Co. (four), £4,850; *L. Tillett Bros. (Builders), Ltd. (six), £8,094.

Gateshead.—Factory at North Eastern Trading Estate, for Dependable Products, Ltd. Architects: Hetherington & Wilson, County-chbrs., Westgate-rd., Newcastle: *Hadden & Hillman, 127, New Bridge-st., Newcastle.

Glasgow.—Reconstruction of Plantation Quay for Clyde Navigation Trust: *George Wimpey & Co., Ltd., £59,842.

Glastonbury.—30 houses at Windmill Field Hill site, for T.C.: *W. J. Channing & Co., Ltd., Burnham-on-Sea, £37,194.

Gloucestershire.—Erection of Almondsbury, Patchway, Infants' school, for E.C. C.A., Shire Hall, Gloucester, for C.C.: *W. & V. Lewis (Building Contractors), Ltd., Station-rd., Pilton, nr. Bristol, £34,760.

Golborne.—24 houses and eight bungalows and two bungalows at Maple-av. and Dale-rd., respectively, for U.D.C. A. Clough, S.: *Direct Labour.

Guildford.—12 houses at Bellfields estate, for T.C.: *C. C. Yeates & Co., Ltd., Guildford.

Gwyrfai.—Eight houses for R.D.C. D. A. Roberts (L.), Llwellyn, Caernarvon: *Direct Labour.

Hastings.—34 houses at Hollington estate, for T.C.: *Jones Bros., Old Mill Workshops, Baldslow, £42,972.

Hexham.—12 houses at Allendale, for R.D.C. Architects: W. Dixon & Son, 1, Collingwood-st., Newcastle: *H. Wallace & Sons, Hencotes, Hexham.

Hexham.—10 houses at Ovingham, for R.D.C.: *J. H. Newman & Son, Hexham.

Howden.—Airey houses for R.D.C.: *Morley Bros., Bubwith (18); *A. Schofield, Hornsea (eight). (Subject to M.H. approval.)

L.C.C.—Enlargement of nursery at Alexandra House, Maitland Park, St. Pancras:—

George Keetch & Sons, Ltd., N.1	£24,963
Patman & Fotheringham, Ltd., Islington	22,424
Bernard Sunley & Sons, Ltd., W.1	21,699
F. Troy & Co., Ltd., Westminster	21,226
Globe Contractors, Ltd., Watford	20,450
Gilbert-Ash, Ltd., W.1	20,280
Bridge Walker, Ltd., Brixton	19,949
Rowley Bros., Ltd., Tottenham	19,894
A. N. Coles (Contractors), Ltd., Bayswater	19,527
Sloggetts (Contractors), Ltd., S.W.7	19,385
*John Lewis Building, Ltd., Perivale	18,986

Comparable estimate of architect is £20,839.

Construction of pile and beam foundations for seven blocks of dwellings at Berner estate, Stepney:—

Franki Compressed Pile Co., Ltd., S.W.1	£25,499
Simplex Concrete Piles, Ltd., Kensington	23,051
Christiani & Nielsen, Ltd., S.W.1	21,600
Bierrum & Partners, Harrow	£20,875
Concrete Piling Co., Ltd., S.W.1	19,687
*West's Piling & Construction Co., Ltd., Harmondsworth	18,867

Comparable estimate of director of housing and valuer, £16,697.

Lichfield.—Works at Trent Industrial Trading Estate for Philday Cabinet Co., Ltd.: *J. R. Deacon, Ltd., Lombard-st., Lichfield.

Llanfyllin.—32 houses at New-rd., for T.C.: *J. Deam & Co., Llanfyllin, £42,716 (negotiated tender approved by M.H.).

Lleyn.—Six houses at Fourcrosses, for R.D.C. J. Egbert Griffiths, architect, 1, Bank-pl., Portmadoc: *Roberts & Hughes, Minafon, Llannor, Pwllheli, Caernarvonshire, £7,350.

¶London (Admiralty).—*Emsworth House, Emsworth, Hants:* Heating installation, Norris Warming Co., Ltd., 18, Hampshire-terr., Portsmouth.

¶London (Admiralty).—*Sheffield,* Janson-st., Ordnance Establishment, Builders' work to ventilation scheme, J. Wilkinson & Sons (Builders), Ltd., Olive Grove Works, Midhill-rd., Sheffield.

¶London (Air Ministry).—Contracts to the value of £500 or over for the week ended May 10, 1947: Demolition work, Haymills (Contractors), Ltd., London, W.5. Heating and hot water installation, W. H. Gascoigne & Co., Ltd., London, W.6; Bearfoot & Bryett, Ltd., London, S.E.10. Electrical work, Negus Electrical Co., Cambridge. Painting work, Arnold Sharrocks, Ltd., Rochdale.

¶London (M.O.W.).—Contracts placed by M.O.W. for week ended May 8:—*London:* Roosevelt Memorial, execution of layout, paving, boundary walls, etc., Trollope & Colls, Ltd., Trocoil House, 41-44, Gt. Queen-st., W.C.2. Southgate, Winchmore Hill Senior school, temporary school building and kitchen and dining-room, A. Scott & Sons, (London), Ltd., 2a, Ridge-ave., Winchmore Hill, N.21. *Caernarvonshire:* Botunnog Grammar school, temporary school buildings, G. & J. N. Gregory, 24, High-st., Caernarvon. *Carmarthenshire:* St. Clears County Primary school, temporary school buildings, Glyn Davies, Gwilfor, New-st., Kidwelly. Llanelly R.D.C.2, temporary houses, Isaac Jones (Llanelly), Ltd., Temple Joinery Works, Pumau, Llanelly. *Denbighshire:* Rhoslianerchyngog school, Wrexham, temporary school buildings, Martin Evans, Cambrian-yard, Bridge-st., Wrexham; Wrexham, Brynteg school, temporary school buildings, Martin Evans, Cambrian-yard, Bridge-st., Wrexham. *Essex* East Ham, B.C.10, Tarran and Universal houses, Henry Kent (Builders), Ltd., 51, Beacon-rd., Hither Green. Chelmsford, T.O.B., access road, E. Scott Hale, Ltd., 47, Globe-rd., Romford. Colchester, St. Helens school, additional classrooms, Henry Everett & Son, 70, Barrack-rd., Colchester. Witham Modern Secondary school, additional classrooms, T. J. Evers, New-rd., Tiptree, Essex. Mannington Secondary school, additional classrooms, Haymills (Contractors), Ltd., 10a, Queen-st., Ipswich. Braintree Secondary school, additional classrooms, E. C. P. Brand, Mount House Works, Braintree, Essex. Brightlingsea Secondary school, Walton-on-the-Naze P. school, West Mersea P. school, additional classrooms, F. J. Huggett & Sons, 64, Station-rd., Clacton. Fakely, Brewers and C.P. school, Hatfield Heath C.P. school, additional classrooms, E. Scott Hale, Ltd., 47, Globe-rd., Romford. Saffron Walden, Fairycroft-rd., additional classrooms, T. Harris & Sons, High-st., Dunmow, Essex. Hornchurch, Suttons-la. school, additional classrooms, Harry West & Sons (Builders), Ltd., 5, Cardover-rd., Romford, Essex. *Glam.:* Swansea, Goss-rd. school, temporary school buildings, Rogers & Davies, Humphrey-st. Yard, Swansea. Cardiff, Gladstone school, temporary school buildings, A. N. Coles (Contractors), Ltd., 286, Newport-rd., Cardiff. Cardiff, Windsor Clive school, Ely, temporary school buildings, A. N. Coles (Contractors), Ltd., 286, Newport-rd., Cardiff. *Hampshire:* Bournemouth, Winton Moordown County Primary school, Oswald-rd., temporary classrooms, W. Hayward & Sons, 400b, Holdenhurst-rd., Bournemouth. Bournemouth, Gladstone-rd. school, canteen and kitchen, A. S. Prince & Co., Ltd., 1079, Christchurch-rd., Bournemouth. Hedge End Senior school, classroom, George S. Hallum & Sons, 9, Carlton-cres., Southampton. *Herts:* Bushey Hall Farm estate, foundations and Hill-Orlit houses, Comben & Wakeling, Ltd., 603-605, Kenton-rd., Kenton, Harrow, Middx. *Kent:* Paddock Wood, Brenchly school, temporary school building, Campbell & McGill, Ltd., 5, High-st., Chislehurst. Cranbrook R.D.C., Frights-in., site preparation permanent housing, J. W. Ellingham, Ltd., 4, Granada House, Gabriels Hill, Maidstone. *Lanarkshire:* Glasgow, St. Gerards' Senior Secondary school, temporary classrooms, Cowiesons, Ltd., 5, Charles-st., St. Rollox, Glasgow, 2. Glasgow, St. Columba's Junior Secondary school, temporary classrooms, Cowiesons, Ltd., 5, Charles-st., St. Rollox, Glasgow, 2. Glasgow, Hollyrood Senior Secondary school, temporary classrooms, Cowiesons, Ltd., 5, Charles-st., St. Rollox, Glasgow, 2. Glasgow, St. Saviour's school, temporary classrooms, Thomas Stewart, Ltd., 24, Lahleven-rd., Glasgow, S.2. Glasgow, St. George's school, temporary classrooms, Thomas Stewart, Ltd., 24, Lahleven-rd., Glasgow, S.2. Glasgow, Allan Glens school, temporary classrooms, T. Cooper & Co. (Builders), Ltd., 25, Dobbie's Loan, Glasgow, C.4. *Lancs:* Manchester, Wythenshawe, temporary Sorting Office of Hollyhedge, E. E. Coleman, Ltd., Waverley-rd., Sale, Ches. *Middx:* Osterley, The Grove, Hostel for Paraplegics, Pitchers, Ltd., 57, Ashburton-gr., Holloway, N.7. *Monmouthshire:* Monmouth, Rempley Factory, structural steelwork, T. F. Howells, Ltd., 83, Bartlett-st., Caerphilly. Newport, Brynglass Central school, temporary school buildings, A. N. Coles (Contractors), Ltd., 286, Newport-rd., Cardiff. *Norfolk:* East Caister school, dining-room and kitchen, W. Ames, Ltd., 3, Deneside, Gt. Yarmouth. Wymondham and Stalham Secondary school, North Walsham C.P. school, additional classrooms, Bush Builders (Norwich), Ltd., 56, Cromer-rd., Norwich. *Oxfordshire:* Bicester C. of E. Voluntary Secondary school, temporary classroom, W. A. Collison, Britannic-rd., Banbury. *Pembrokeshire:* Milford Haven Central school, temporary school buildings, Caffin & Co., Ltd., Riverside Station-yard, Neath. *Shropshire:* Wellington, temporary garage and workshop, W. Higley & Son, 8, Pride Hill-chambs., Shrewsbury. *Somerset:* Radstock, Norton Radstock County school, temporary school buildings, Plummer & Hockey, Wells-rd., Radstock. *Staffs:* Lichfield Central Voluntary Secondary school, temporary school buildings, J. R. Deacon, Ltd., Limbard-st., Lichfield, Staffs. Newcastle-under-Lyme, Orme Boys' Secondary school, Highlands, temporary school buildings, George A. Poole, 37, Liverpool-rd., Newcastle-under-Lyme, Staffs. Newcastle-under-Lyme, Watland County Secondary school, temporary school buildings, George A. Poole, 37, Liverpool-rd., Newcastle-under-Lyme, Staffs. *Surrey:* Esher, Ham-ln., Claygate, temporary Telephone Exchange, Lavender McMillan, Ltd., 54, Cheam Common-rd., Worcester Park. *Wilts:* Salisbury, Odstale Hospital, laying asphalt roofing, Western Asphalt and Tar Paving Co., Ltd., 123, Eastern-rd., Bristol, 5. *Yorks:* Kingston-upon-Hull, C.B.12, site works and temporary houses, Quibell & Son, Ltd., 354, Beverley-rd., Hull. York, Derwent Junior school, temporary school buildings, Ainsty Building Estates, Ltd., Lantern Tower-chambs., Coppergate, York.

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Luton.—Works for T.C.: Library at Stopsley: *Building Contractors (Luton), Ltd., £2,834; 100 "Wates" houses at Farley Hill estate: *Holland & Hannen & Cubitts, Ltd., 1, Queen Anne's-gate, S.W.1, £134,106; two blocks of flats and old people's dwellings at Harthill estate: *T. & E. Neville, Ltd., Skefko Works, Luton, £12,403 and David Nott & Sons, Trinity-rd., Luton, £12,175 (all subject to M.H. approval).

Mablethorpe and Sutton.—Seven houses at Byron-rd., Mablethorpe, and 16 houses at Cade Field, Sutton-on-Sea, for U.D.C.: *H. Dongill, Victoria-rd., Mablethorpe, £8,504 and £20,310.

Macclesfield.—Structural alterations for maternity unit at Macclesfield Infirmary, for Board of Governors. H. Kelly, architect: *Cooper Bros., and John Clayton, Ltd., Catherine-st., Macclesfield.

Montgomeryshire.—Works for E.C. H. Carr (F.). Alterations and extensions at Newton Secondary school: *A. Reading Jones & Son, Newtown, £562; canteen kitchen and dining-

room at Sarn C.E. Primary school: *A. Reading Jones & Son, Newtown, £964.

Morecambe and Heysham.—Public conveniences at motor-coach station, Heysham-rd., for T.C. R. B. Savage, B.S.: *William Huddleston, Sefton-rd., Morecambe and Heysham, £5,462.

Newcastle-on-Tyne.—Laboratory and cloakroom at Central High school, Eskdale-ter. Architects: L. J. Couves & Partners, Carliol House, Newcastle: J. R. Rutherford & Sons, Jesmond, Newcastle-on-Tyne.

Newcastle.—84 concrete houses, for City Council: ‡Geo. Wimpey & Co., Ltd., £1,186 per house.

Northants.—Erection of Primary Boys' school at Corby, for C.C. J. Perkins (L.), County A.: *John Ellis & Sons, Ltd., Welford House, Welford-st., Leicester (estimated cost, £80,000).

Nottingham.—31 dwellings for aged people, together with two flats, warden's house, heating and communal centre at Helston-dr., Broxstowe, for T.C. H. Kellett Ablett (A.), A.M.T.P.I., Housing Architect: *J. W. Stamp & Co., Nuthall-rd., Bobbers Mill, Nottingham, £34,605 (subject to M.H. approval).

Peterborough.—Erection of Glenton Rural Secondary school, for Joint Education Board: *Bettles Building Co., Ltd., 2, Waterloo-rd., Peterborough, £8,885; *Dorman Long & Co., Ltd., for steelwork, £12,044.

Ripley (Derbys).—24 houses at Bullbridge estate, for U.D.C. W. E. Clark, S.: *Shipman & Hague, Ripley, £31,361.

Rotherham.—124 houses at Thorpe, for T.C.: *Rotherham Master Builders' Federation, £144,086.

Rotherham.—Works at Kilnhurst Steel Works, for John Baker & Bessemer, Ltd.: *Head, Wrightson & Co., Ltd., Teeside Iron Works, Thornaby-on-Tees, and *G. P. Wincott, 180, Attercliffe-rd., Sheffield 4 (estimated cost, £150,000).

Salford.—10 houses, together with site works at Eccles Old-rd., Pendleton, for City Council: *C. Musker Bros., Ltd., Swinton, £10,604 (subject to M.H. approval).

Salisbury and Wilton.—Houses at Charlton All Saints, for R.D.C.: *McLaren, £7,292 (subject to M.H. approval).

South Westmorland.—Four houses at Heversham, for R.D.C. E. Middleton (A.), 46, King-st., Lancaster: *J. E. Procter, White Lund, Morecambe and Heysham, £5,156.

Stretford.—Houses for T.C. A. H. Perry, B.E. 26 at Firs Farm site: *Humphrey Park Estates, Ltd., 57, Humphrey-la., Urmston; 34 at Barton-rd. site: *Hampson, Kemp, Ltd., Chorlton-cum-Hardy, Manchester 21; 72 houses at Sandy-la. site: *Normantons, Ltd., 167, Plymouth-gr., Chorlton-upon-Medlock, Manchester 13.

Sunderland.—Factory at Pallion, for North-Eastern Trading Estates, Ltd., Low Fell, to be let to Mayfair Cabinet Works: *R. G. Finlay, Ltd., West Sunniside, Sunderland.

Tenbury.—14 houses, roads and sewers, for R.D.C. W. R. Jarvis, S.: *McVolville & Evans, Knighton-rd., Presteign, Radnor.

Tonbridge.—41 houses and four flats at Trench Wood, for U.D.C.: *E. Punnett & Sons, Ltd., £18,103 (14); and four flats, £2,875: *J. C. Elkington, Ltd., £18,430 (14); *J. E. Woolley, £10,239 (eight); *Stoneley & Son, £6,430 (five).

Tynemouth.—62 houses at Broadway "A" site, for T.C. D. M. O'herlihy, B.E., 19, Howard-st., North Shields: *A. E. Appleton, North Shields, £76,300.

Wainford.—Four Swedish houses at Barsham, for R.D.C.: *J. Botwright & Son, £3,554 (in lieu of previously accepted tender).

Wallsend.—15 houses in flats at Archer-st., for T.C. G. N. Teasdale, B.E.: *J. H. James, Wallsend, £1,778 per house in flats (subject to M.H. approval).

Weymouth.—Factory for Bristol's Instrument Co., Ltd. Adie, Button & Partners, architects, 29, Weymouth-st., Portland-pl., W.1: *E. H. Burgess, Ltd., 34, Grosvenor-gdns., London, S.W.1.

Withnell.—26 houses at Oak Tree site, for U.D.C. G. L. Gregson, S.: *W. Brown, Withnell, nr. Chorley.

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